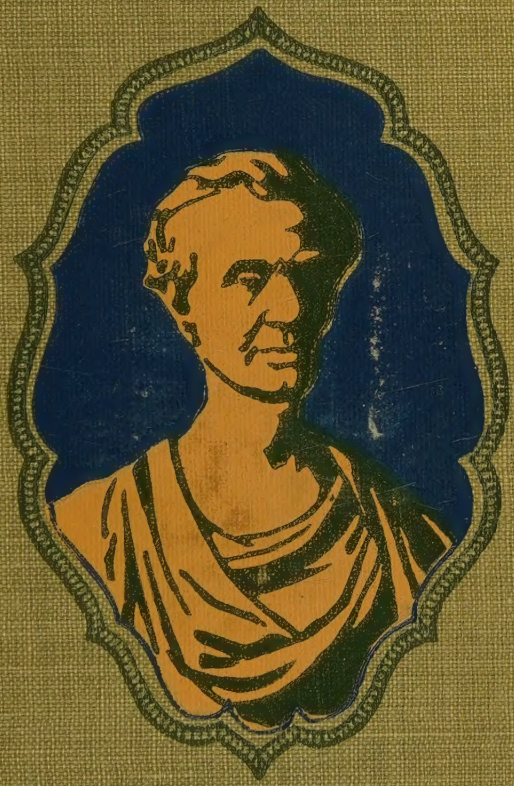

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MEN WHO HAVE RISEN

EDITED BY

HAMILTON WRIGHT MABIE

VOLUME XVII

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OPENING THE DOORS OF OPPORTUNITY

BY

HAMILTON WRIGHT MABIE.

Men have always had a great liking for fairy-tales and taken a great interest in magic, and these traits have been set down as expressions of idle curiosity, of the love of the strange and marvellous. The cravings of the race are not, however, to be lightly treated nor ignobly explained. Fairy-tales, we have come to understand, were not mere stories of fantasy strung together to amuse idle people; they have real importance because they show how the mind works before it has become well-informed, and because they give men what men have always wanted: free play of all the energy and life they feel within them. The imagination is always making a larger and better world than that which we see, and shaping for us a fuller and more powerful life than that which we live. Fairy-tales interest us because they give us pictures of a world in which men do marvellous things with ease, and are helped or hindered by all manner of small and great creatures which lurk and hide in forests and under-

ground; and magic delights us because it accomplishes so much with means so few and materials so apparently inadequate.

In like manner and for the same reason, men are always eager to hear the stories of the heroes; those who have overcome great difficulties, surmounted great obstacles, and won the race in the face of all kinds of discouragements. Men rejoice in the success of those who like Washington and Gladstone, start with many advantages, and instead of being indolent are stimulated to great exertion by great opportunities; but they care most of all for the success of those who, like Lincoln, begin with nothing except the capital of character and capacity of work, and end at the very summit of usefulness and honor. In the careers of men of small beginnings and great endings there is a touch of magic, a bit of the old fairy-tale of the childhood of the race.

This volume belongs to the literature of the fairy-tale and of magic; it fulfils what they predicted; it tells of real men the marvellous things which they told of imaginary men; it is a true and noble wonder-book, full of marvels, heroic deeds, splendid works begun in the deepest obscurity and finished in the searching light of fame. It is a book of history, and it is also a book of prophecy; to the boy or girl who reads it with a kindling imagination it promises the same noble rewards which are won by those whose

heroic stories it recalls. It is a book of sober truth, but it is also a record of marvels quite as astonishing as any which are found in the old fairy-tales. As science has matched the marvellous forces and doings in these old stories with realities as wonderful and as difficult to explain, so this account of the ways and deeds of great men shows that character, industry, courage, and force are really magical powers, and that he who has them can do things as marvellous as the doings of the magicians.

The essence of magic, and that which makes it interesting, is the ease with which it does the most difficult things with a few common materials; and this is characteristic of the lives of those whose stories are told in this volume. They began with the fewest and simplest things; they ended with great possessions of fame, influence, wealth. They seemed to have the magical touch, so that everything that came into their hands straightway became something greater and more interesting. Franklin and Lincoln had, apparently, nothing to work with or for; but in the end they stood in places which were inaccessible to the men of their time who started with everything to help them. In all the fairy-tales there is nothing more wonderful than the contrast between Franklin, the printer's apprentice, and Franklin the chief figure in the most brilliant city in the world; between Lincoln floating down the Ohio on a flatboat, and Lincoln

liberating with a stroke of the pen four million slaves.

There is, however, one great difference between the old fairy-tale and these modern stories of magical results secured from the commonest materials: in the old stories the man is helped by fairies, elves, kobolds, and many other strange creatures; in the modern story he helps himself. There is much that is wonderful in the results secured by these modern magicians, but there is nothing wonderful in the process by which the results are secured. There is no mystery about success; no intervention of genii or fairies; no luck or fortune. This volume shows that if men do anything great they do it themselves; it is not done for them. It also shows that no man becomes great by accident; greatness is the fruit of hard work. The history of men who believe in luck, and wait for things to "turn up," is not written in this book; it is to be found in the book of failures. Luck, fate, fortune, accident, and chance are words which have no place in the speech of great men; real men do not use these words, because they do not stand for realities. In the dictionary of the heroes they are not to be found.

Men of success begin by disbelieving in luck, chance, and fortune. They refuse to believe in that which they do not possess. They have no luck, no fortune, no chance; therefore they act as if there were no such

things in the world, and they prove that there are not. Without luck, chance, or fortune they secure all the great prizes.

A man's luck is in himself, his chance is in his ability to get something to do, and his fortune in the skill and energy with which he does it. When it is said that a man is lucky, it means that he has brains and uses them; when it is said that things come his way, it means that he has gone after things. The theory that success is a matter of accident, and that opportunities come by chance, is often used by weak and inefficient men to explain their failures; it is disproven by the lives of the heroes. The heroes know nothing of accident and luck; they know everything about integrity, energy, courage, and faith.

This book also shows that we are living in a world quite as full of unseen forces and mysterious powers as was the old world of the fairy-tale and the magician. In the real world, as truly as in the magical world, men are immensely helped or hindered by things and persons about them; with the difference, however, that in the real world men decide for themselves whether they will be hindered or helped. There is no chance in the matter; each man decides for himself. Franklin and Lincoln chose to be helped, and were helped in marvellous ways. No man, however great and far-seeing, can see his whole life from the beginning to the end; no man ever planned his life com-

pletely in advance. All that the wisest man can do is to set his face in a certain direction, put all his energy and enthusiasm into his work, and straightway opportunities begin to present themselves. Franklin's career must have been as much of a romance to him as it is to us; he could not have dreamed that a future of such extraordinary relationships with great men abroad, of such unusual public influence, was to be his. What he did was to put into his life constant integrity, frugality, self-control, inventiveness, and persistence; these qualities, with his skill in turning knowledge to practical account, soon set the tide of prosperity running his way. The world co-operated with him; it matched his intelligence and force with ample opportunity. These opportunities were often so unpromising at the first glance that Franklin could not have foreseen whither they would lead him. Into each opportunity as it came he put his full power; and the opportunity soon grew larger, became more interesting, and almost insensibly led him to really great things.

At the start opportunities are rarely very striking or promising; they are often very small gates into what appears to be very small fields of action; but let a man pass through them with resolution and intelligence, and immediately the field widens until it takes on, at times, the scope of a continent.

The world looks very hard to the young man; all the places are filled; everybody is preoccupied, and there

seems to be no chance for a newcomer. He feels as if all men were banded together to keep him out. Let him show a little heroic quality, however, and men are quick to make place for him; let him put energy, pluck, integrity, and intelligence into his work, and doors begin to open under the pressure of his strong hand.

No man ever faced a more unpromising future than Lincoln. Poor, ignorant, without educational opportunity, far from the centres of action, uncouth in person, untrained in mind, unaided by influential friends, there seemed to be nothing ahead of him but a life of work with his hands, a clerkship in a country store, or at the best, a small practice as a half-educated lawyer in a frontier town. He was all these by turns, but he did not remain any of these long. To a boy and youth of common mould, the rude farm-work, the work on the flatboat and in the country store, would have become a life-work. Lincoln had, however, the heroic temper; the spirit which turns small things into great ones, and uses the narrow opportunity with such ability that it becomes the great opportunity. He was farm-hand, flatboat man, country clerk, and country lawyer by turns, and he remained content with none of these positions: he was always ahead of his work, always pushing on into something better. After a time, by the force of the influences he set in motion, things began to come to him, and as they came he

made the best of them; each bit of ground gained was used as a point from which a farther advance was made; and so by a long, quiet, patient process, the boy of the old frontier reached the summit, having made the ascent by his own energy, courage, and rare nobility of spirit.

Some men are more favorably situated at the start than others, but in the long run the inequalities of condition disappear; it is the man who comes into clear light as the shaping force. Large opportunities in the hands of small men come to nothing; small opportunities in the hands of large men become great. All that a strong man ought to ask for is an opportunity; the rest he ought to do for himself. This is the record of the heroes; those who have worked, dared, aspired, and achieved; who have poured their vitality into their work, not simply for what they could get out of it, but because it is the privilege and the joy of a real man to share the labor and the experience of his fellows, and to bear his share of the burdens of society.

This book of heroes brings out another very interesting fact; no matter how selfish the man of heroic temper may be at the start, he invariably becomes a great helper of his race. Many of the men whose stories are told in these pages set out with the purpose of being helpful to their fellows and of rendering great public services; others worked, apparently, chiefly for

themselves; but in the end each and all wrought for the common good. The inventors, the public men, the engineers, the men of Letters, the scientists, the artists, and the organizers of business contributed to the wealth, the comfort, the health, the beauty, or the interest of the world. As each was helped by forces and influences which he evoked but which he did not always recognize, so each worked more nobly and generously than he realized at the moment; for all men who are wise, virtuous, energetic, and intelligent build better than they know. They increase the moral and intellectual capital of society. Every great man makes life interesting; every industrious and capable man makes life comfortable; and every noble man makes life greater and more attractive. Mr. Morley recently described Mr. Gladstone as "a resounding example of what a great thing a great man can make of a life." It is for this reason that this volume is a true wonder-book.

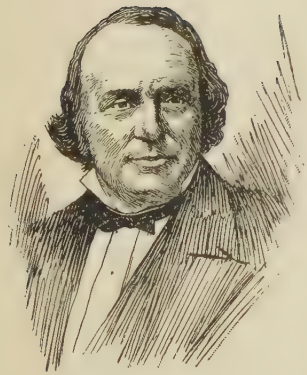
H. W. Mabie

MEN WHO HAVE RISEN

JEAN LOUIS RODOLPHE AGASSIZ—NATURALIST[1]

(From Men Who Win.)

By W. M. THAYER.



Louis Agassiz.

JEAN LOUIS RODOLPHE AGASSIZ belonged to both Europe and America. He was born in the village of Motiere, Switzerland, May 28, 1807, and in 1846 became the adopted son of New England. The remainder of his useful and remarkable life was spent in the United States.

His father was a clergyman, having a small salary, a pastor beloved and honored. He occupied the parsonage, which was a very convenient and pretty dwelling on the shore of Lake Morat.

His mother was Rose Mayor, daughter of a physi-

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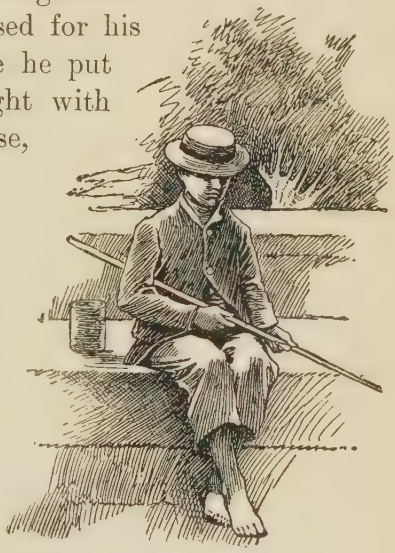
cian at Cudrefin, situated on the shore of the Lake of Neuchâtel. . . .

That Louis had a bent towards natural history was discovered early. His biographer says, "Louis's love of natural history showed itself almost from infancy. When he was a very little fellow he had, besides his collection of fishes, all sorts of pets — birds, field-mice, hares, rabbits, guinea-pigs, etc., whose families he reared with the greatest care. Guided by his knowledge of the haunts and habits of fishes, he and his brother Auguste became the most adroit of young fishermen, using processes of their own and quite independent of hook, line, or net. Their hunting-grounds were the holes and crevices beneath the stones, or in the water-washed walls of the lake-shore. No such shelter was safe from their curious fingers, and they acquired such dexterity that when bathing they could seize the fish even in the open water, attracting them by little arts, to which the fish submitted as to a kind of fascination. . . . His pet animals suggested questions, to answer which was the task of his life; and his intimate study of the fresh-water fishes of

He Became the Most Adroit of Young Fishermen.

Europe, later the subject of one of his most important works, began with his first collection from the Lake of Morat."

Reference to his first collection of fishes from the Lake of Morat, in the foregoing extract, needs explanation. Behind the parsonage was a fine spring of water that flowed into a large stone basin, and this Louis used for his first "aquarium." Here he put the live fishes he caught with his hands, or otherwise, on the shore of the lake, and he spent much time in studying their habits. It was not amusement alone that he found in this boyish enterprise, but it was instruction. It will not be difficult to establish the connection between his collection of animals behind the parsonage and his Museum of Natural History at Harvard College.



Louis Fishing.

On another line, also, Louis was a constant learner. It was customary then among the Swiss for the shoemaker, carpenter, and tailor to go through the villages seeking jobs. The shoemaker came several times a year to the parsonage to repair and make shoes for the family, and Louis watched him with deep interest in order to learn how shoes were made. That he

made the most of the opportunity is clear from the fact that he became able to make well-fitting shoes for dolls. He could also make and fit dolls' dresses with remarkable ability, because he watched the tailor whenever he came to make garments for the family. And the same was true of the carpenter; unwittingly he became Louis's instructor, so that the boy would handle tools with creditable facility.

The barrel-maker also came once a year, before the vintage, to repair old barrels and make new ones. Louis looked on — to learn. He actually became so expert that he could make a water-tight miniature barrel, which was regarded as a curiosity by the village people. These boyish methods were education to him, and did much to introduce him to the sphere of intellectual work he occupied. He often said in his manhood, when it was necessary for him to handle tools, that he owed his dexterity therewith to his boyhood practice.

Louis was a daring boy, equal to almost any emergency. He was a superior skater at seven years of age, and his brother, two years younger, could skate also. In winter the lake furnished them with plenty of this pastime. One day they were skating with a large number of village boys when the conversation turned upon a fair that was in progress on the other side of the lake. Louis's father went thither in the morning, so he proposed to his little brother that they skate across the lake, join their father at the fair, and ride home with him in the afternoon. This was in the forenoon; and off they went elated with the idea of seeing the fair and riding back with their father.

At noon the village boys returned from the lake for dinner. As Louis and his brother did not return, their mother inquired where they were, and she was told of their expedition to the fair. Startled by the tidings, she rushed back to the parsonage, and, seizing a spy-glass, ran up to the attic window to look for them. It was two miles across the lake, and she knew that the trip was not a safe one on account of fissures in the ice. She discovered them nearly across the lake, Louis lying flat upon his face over a fissure, that Auguste might use his back for a bridge over the narrow chasm. Filled with alarm, Madame Agassiz went to a workman, who was an excellent skater, and besought him to hasten to their rescue as quickly as possible, which he did. He reached them just as they were skating up to the opposite shore. Not knowing anything about the boys' plan to ride home with their father, he turned them about, and skated back with them to the great relief of their mother, themselves disappointed that they did not see the fair. . . .

Mr. and Mrs. Agassiz had planned to send Louis away to school at ten years of age, and they had been practising the most rigid economy in order to consummate their purpose. There was a school, or college, for boys at Bienne, and it was to this institution that they planned to send him. . . .

That Louis put excellent work into his studies is plain from a memorandum that he made upon a sheet of paper near the close of his four years' course.

"I wish," the record was, "to advance in the sciences, and for that I need d'Anville, Ritter, an Italian dictionary, a Strabo in Greek, Mannert, and Thiersch;

and also the works of Malte-Brun and Seyfert. I have resolved, as far as I am allowed to do so, to become a man of letters, and at present I can go no further. First, in ancient geography, for I already know all my note-books, and I have only such books as Mr. Rickly can lend me; I must have d'Anville or Mannert. Second, in modern geography, also I have only such books as Mr. Rickly can lend me and the Osterwald geography, which does not accord with the new divisions; I must have Ritter or Malte-Brun. Third, for Greek I need a new grammar, and I shall choose Thiersch. Fourth, I have no Italian dictionary, except one lent me by Mr. Moltz; I must have one. Fifth, for Latin I need a larger grammar than the one I have and I should like Seyfert. Sixth, Mr. Rickly tells me that as I have a taste for geography, he will give me a lesson in Greek (gratis), in which we would translate Strabo, provided I can find one. For all this I ought to have about twelve louis. I should like to stay at Bienne till the month of July, and afterward serve my apprenticeship in commerce at Neuchâtel for a year and a half. Then I should like to pass four years at a university in Germany, and finally finish my studies at Paris, where I would stay about five years. Then at the age of twenty-five I could begin to write."

This is a remarkable paper for a boy of fourteen to write. It shows that his intellectual progress must have been phenomenal, otherwise he could not have mapped out such a course of study for nine years to come. He must have put in much more thought and reflection than his immediate studies required. He was canvassing the future, while improving the present

with almost unexampled success. Within the grasp of his young mind was held a curriculum, such as a college professor might lay out with credit to himself.

Before Louis went to Bienne, the decision of his parents was that, at fifteen, he should quit school and enter the business house of his uncle, François Mayor, at Neuchâtel. But his progress at school had developed a larger degree of ability than his parents anticipated. It seemed to them that he ought to make something more than a trader. Mr. Rickly was of that opinion also, and united with Louis in asking his father to send him to a college in Lausanne for still higher instruction. . . .

Accordingly he went to Lausanne, where he soon was regarded by the professors as a genuine naturalist in embryo. The director of the Cantonal Museum, Professor Chevannes, possessed the only collection of natural history in the Canton de Vaud, and he gave Louis free access to all there was to attract him. Professor Chevannes proved a valued friend to the aspiring student, as did all the professors in the college. His uncle, Dr. Mathias Mayor, desired that he should study medicine at Zurich, as now it was settled that he should not go into business with his uncle, François Mayor. His friends were not pleased with his love of natural history, thinking that a livelihood would be quite impossible from that calling alone. He must have some more definite profession, and the medical seemed to them the most promising. He was called "the young naturalist" by the faculty and students of the institution, and his enthusiasm was so great that his father misconstrued it. He

wrote Louis a characteristic letter about this time, from which we extract the following: —

"Your mother's last letter, my dear Louis, was in answer to one from you that crossed it on the way, and gave us, so far as your health and contentment are concerned, great satisfaction. Yet our gratification lacks something; it would be more complete had you not a mania for rushing full gallop into the future. I have often reproved you for this, and you would fare better did you pay more attention to my reproof. If it be an incurable malady with you, at all events do not force your parents to share it. If it be absolutely essential to your happiness that you should break the ice of the two poles in order to find the hairs of a mammoth, or that you should dry your shirt in the sun of the tropics, at least wait till your trunk is packed and your passports are signed before you talk with us about it. Begin by reaching your first aim — a physician and surgeon's diploma. I will not for the present hear of anything else, and that is more than enough."

Louis considered the matter philosophically, and went to Zurich to study medicine; but he continued to be more of a naturalist than anything else. Still he devoted himself to his studies with all his heart, and found that the door of medicine opened directly into Professor Schinz's department of natural history and physiology. The professor soon learned that Louis Agassiz was a born naturalist, and gave him the key to his private library and his collection of birds. This was turning him into clover at once, a most unexpected experience. While he did not really neglect the medi-

cal course of study, he did attend to natural history with increased enthusiasm. Often he turned night into day by actually copying books that his poverty would not permit of his owning. . . .

Louis took his degree at Zurich, going home as Dr. Jean Rodolphe Agassiz, and his parents were happy. By this time, his instructors at Zurich having spoken in such high terms of his gifts as a naturalist, his parents acquiesced in his going to the University of Heidelberg. He was nineteen years of age at the time, bearing university honors of which a professor at forty might have been proud. He was poor as ever, obliged to economize in every possible way, and he was equal to the necessity. He wrote to his father from Heidelberg: —

Agassiz when a Young Man.

"As soon as I know, for I cannot yet make an exact estimate, I will write you as nearly as possible what my expenses are likely to be. Sometimes there may be unlooked-for expenditures, as, for instance, six crowns for a matriculation paper. But be assured that at all events I shall restrict myself to what is absolutely necessary, and do my best to economize. The same of the probable duration of my stay in Heidelberg; I shall certainly not prolong it needlessly.". . .

His brother Auguste separated from him at Zurich,

and went into business with his uncle, François Mayor, at Neuchâtel. He wanted a certain book, and he wrote to Louis for it after the latter had gone to Paris for further study. It was some time before Louis forwarded the book to him, and he apologized thus: "In the first place, I had not money enough to pay for it without being left actually penniless. You can imagine that after the fuel bill for the winter is paid, little remains for other expenses out of my two hundred francs a month, five louis of which are always due to my campanion. Far from having anything in advance, my month's supply is thus taken up at once." In the same letter he gave a reason why he did not accept invitations to attend gatherings of notables: "I have no presentable coat." Later on, when he was preparing his first work for the press, and obliged to employ an artist to draw his illustrations, he was able to pay the latter out of his stipend only by getting his own breakfast in his room, and purchasing his dinner at the cheapest restaurant in town for a few cents. But a happier young man was not found in the institution. Poverty could not dampen his ardor; it only served to increase his industry and strengthen his resolution.

Having spent two years at Heidelberg, he went to the University of Munich, where even more famous professors than those of Heidelberg taught. He was accompanied by Alexander Braun, a young botanist, who became famous in after years. Their student-life at Munich continued two years, and was crowded with hard work. Louis was as straitened for money here as he had been elsewhere; yet he wrote to his father the following. After detailing his plans, he added: "Here

is my aim and the means by which I propose to carry it out. I wish it may be said of Louis Agassiz that he was the first naturalist of his time, a good citizen, and a good son, beloved of those who knew him. I feel within myself the strength of a whole generation to work towards this end, and I will reach it if the means are not wanting."

His self-reliance as well as his perseverance invest this utterance with prophetic significance. Such a spirit never acknowledges and never knows defeat. No unfavorable circumstances, no amount of privation, no demand for self-sacrifice, ever forces it into retirement; it goes straight to the goal.

At Munich young Agassiz planned and completed his first work on natural history. Although he was but twenty-three years of age, this work won him fame in all lands to the end of his life. He meant to have brought out the work before his parents learned of his purpose. But, in some way, his father on a visit to Lausanne heard that his son was engaged upon such a work. It was a description of Brazilian fishes that were collected by Martins and Spix in their famous journey to Brazil. Mr. Agassiz was somewhat surprised by what he heard, and he feared that his son had made a grave mistake by deciding to issue such a book before completing his studies. Such was the vein of his letters to Louis; but when he received a copy of the book and had examined it, he had only words of commendation for the author. He was as much surprised that his son could produce such a work as he was gratified. His father wrote to him from Orbe (whither he had removed) as follows: —

"I hasten, my dear son, to announce the arrival of your beautiful work, which reached me on Thursday from Geneva. I have no terms in which to express the pleasure it has given me. In two words, for I have only a moment to myself, I repeat my earnest entreaty that you would hasten your return as much as possible. The old father, who waits for you with open heart and arms, sends you the most tender greeting."

Louis made so favorable terms with Cotta, the publisher of his book, that he was able to pay his own bills for a time. He was overjoyed to be no longer dependent upon his father for assistance — a state of affairs for which he had long been hoping. Nor was his mind at rest when his first book appeared. Plans of others, equally important and useful, followed in rapid succession.

On closing his studies at Munich he spent a few months in Vienna, where he made himself familiar with the medical school, the hospitals, and Museum of Natural History. Here he was highly honored by the scientific men of the town; for his fame had gone before him, young as he was. Every attention was shown him, and he was given free access to every library, laboratory, and institution of the city. He wrote to his brother: —

"Everything was open to me as a foreigner, and, to my great surprise, I was received as an associate already known. Was it not gratifying to go to Vienna with no recommendation whatever, and to be welcomed and sought by all the scientific men, and afterward presented and introduced everywhere? In the museum, not only were the rooms opened for me when I pleased, but also

the cases, and even the jars, so that I could take out what I needed for examination. At the hospital several professors carried their kindness so far as to invite me to accompany them in their private visits."

He was so modest that he scarcely seemed to understand that all this was a hearty tribute to his talents and triumphs. He was not made proud or vain by these attentions, and never, thereafter, in all his life appeared to be over-elated by the great measure of his fame.

From the time he was ten years of age, and went away to school, his parents carefully preserved his note-books, copy-books, essays, college reports and kindred documents, as mementos of his accuracy, industry, method, care, and neatness. The chirography was clear and beautiful, every letter was made with care, the arrangement systematic and simple, and not a blot to mar one page. Similar books of Washington, now preserved at Mount Vernon, are not more attractive mementos of his remarkable boyhood and youth, than were those of Agassiz of his early habits and virtues.

The year 1831 Louis spent at home to gratify his parents. But it was a year of close study and progress. His father had become pastor in another parish still, that of Concise, to which place Louis went with as much baggage as a fashionable lady takes with her to Saratoga. It consisted of several boxes of fossils, trunks, scientific outfit, and his artist. He was pursuing the study of ichthyology, with reference to another important work, and he could study at home as well as abroad. So he put in a year of solid labor at the parsonage of Concise. He was but twenty-three years old in May, before

going home, and yet he was Doctor of Philosophy and Medicine, and author of a quarto volume on the fishes of Brazil. He "knew every animal, living and fossil, in the museums of Munich, Stuttgart, Tübingen, Erlangen, Würzburg, Carlsruhe, and Frankfort," and he was well known in all these centres of scientific research.

Agassiz Examining by Microscope.

But his education was not complete. He desired to spend some time in Paris, where he could enjoy superior advantages on some lines of the natural sciences. There was Cuvier's house, with whom he had corresponded, and to whom he had sent a copy of his book, which he hoped would please the venerable naturalist. Cuvier acknowledged the receipt of the book by a lengthy note in which he said, in part: "You and M. de Martins have done me honor in placing my name at the head of a work so admirable as the one you have just published. The importance and the rarity of the species therein described, as well as the beauty of the figures, will make the work an important one in ichthyology, and nothing could heighten its value more than the

accuracy of your descriptions. It will be of the greatest use to me in my 'History of Fishes.' I had already referred to the plates in the second edition of my 'Règne Animal.'"

He arrived in Paris, Dec. 16, 1831. On the same day Cuvier heard of his arrival, and invited him to spend the evening at his house. It was an honorable recognition of true worth, and was fully appreciated by Agassiz. M. Humboldt resided in Paris, also, and showed the young naturalist from Switzerland much attention. Here he found what he called "a wealth of material"; so much that he became even more economical of his time than ever, as the following extract from one of his letters shows: —

"In the morning I follow the clinical courses at the Pitié. . . . At ten o'clock, or perhaps at eleven, I breakfast, and then go to the Museum of Natural History, where I stay till dark. Between five and six I dine, and after that turn to such medical studies as do not require daylight. So pass my days, one like another, with great regularity. I have made it a rule not to go out after dinner — *I should lose too much time.*"

He learned that Cuvier was preparing a work on the same plan as his own, and he knew that if Cuvier's was given to the public, there would be no sale for his. While he was lamenting the misfortune to himself if Cuvier should publish his work, the latter sent for him, and showed the material which he had collected for his book.

"I have examined your material," he said, "since you placed it in my hands, and it is so excellent, and your work so much further advanced than mine, that

I deem it no more than right to put my material at your disposal, hoping that you will be eminently successful in your efforts."

Agassiz was almost overcome by such kindness and generosity. He could scarcely find language to express his gratitude, and for weeks his letters teemed with references to Cuvier's generous act. With new ardor he applied himself to his studies, and he said, when writing to his uncle Dr. Mayor, about it: "To accomplish my end without neglecting other occupations, I work regularly at least fifteen hours a day, sometimes even an hour or two more: but I hope to reach my goal in due time."

Only three months later Agassiz went to work with Cuvier in his study, as he had frequently done before. He was employed upon something Cuvier had asked him to do. They worked until eleven o'clock, when Cuvier invited him to breakfast. After breakfast and a brief period in conversation with the family, they returned to the study. Agassiz continued upon the piece of work Cuvier had given him to do until five o'clock, when he excused himself, saying that it was his dinner hour, after which he would return and finish his task. Cuvier assented and remarked, "Be careful, and remember that *work kills*." These were the last words the great naturalist ever spoke. On the following morning a stroke of paralysis carried him off, adding emphasis to his words, "Work kills," as excessive work does. Agassiz never saw Cuvier alive again, and the disappointment and sorrow to him were well-nigh overwhelming. Cuvier's material, placed in his hand for his new work, was more precious now

than ever. It was the dying legacy of the famous scholar.

But M. Humboldt was left to befriend and advise Agassiz, and he proved himself a friend indeed. Had Agassiz been his own son he could not have been more fatherly. At one time, learning that his poverty was interfering with his plans of future study, as well as with the publication of a forthcoming work, Humboldt presented him with a thousand francs. It was wholly unexpected to the young scholar, and his feelings may be inferred from an outburst of grateful emotion in a letter to his mother. "Oh, if my dear mother would forget for one moment that this is the celebrated M. de Humboldt, and find courage to write him only a few lines, how grateful I should be to her."

At twenty-five years of age Agassiz was amply qualified to fill a professorship of natural history in any university of Europe. The trustees of several institutions were waiting for him to age a little before calling him to high positions. But an institution at Neuchâtel, Switzerland, seizing time by the forelock, invited him to its chair of natural history, and he accepted. Switzerland was his native land, whose "rocks and rills" were dearer to him than the palaces of other realms, so that he did not hesitate a moment about accepting the appointment. He removed to Neuchâtel, and entered upon his life-work. . . .

He more than filled the professorship at Neuchâtel; he overflowed. Other institutions sought his services, because he could fill more important positions. He was invited to a professorship of natural history in

the universities of Heidelberg, Geneva, and also of Lausanne, with larger pay and more distinction, but he declined the flattering calls, and continued his labors at Neuchâtel. He had laid out a definite work in the latter institution, and he would not abandon it for money or honors. His heart was as deeply concerned in its success as his head; his conscience as truly as his will.

In October, 1833, Mr. Agassiz was married to Cécile Braun, sister of his very dear friend and college-mate, Alexander Braun, of whom mention was made on a former page. She possessed rare artistic talent, and it had done noble service for her brother in his botanical studies. Her husband had two important works in preparation when they commenced housekeeping in Neuchâtel, and here she found a new and interesting field as an artist. The two works were "Fossil Fishes" and "Fresh-water Fishes," and her skilful hand furnished some of the finest illustrations in them.

He was so widely known at the time of his marriage that invitations from men of science, in different countries, began to pour in upon him. Such scientists as Professors Lyell, Buckland, and Murchison, of England, sent very urgent requests for him to visit their country. He received a prize of one or two hundred dollars from England, through Professor Lyell, for the superiority of one of his works. But he was so constantly occupied by increasing labors that he could not respond favorably to any one of these calls at the time. Two years later, however, in 1835, he visited England, where he was received with attentions such

as would have been fitting for Humboldt himself. His stay in England added largely to his popularity. He had been honored there because of what the people had heard; now they honored him more for what they had seen. He returned to his work at Neuchâtel thoroughly stimulated by the knowledge that his discoveries and achievements were appreciated abroad. Before he was thirty years old he was elected to the French Academy of Science, the Royal Society of London, and received the degree of LL.D. from the universities of Edinburgh and Dublin.

His fame had reached the United States, and the faculties of Yale and Harvard desired to welcome him to their institutions. Professor Silliman of Yale addressed an importunate appeal to him to visit the United States, but he felt obliged to decline the invitation. It would interfere materially with his plans to extend his researches over Europe, particularly to scour the Alpine country in the interest of the natural sciences, and with special reference to the preparation of other works he had in mind. Nevertheless, he did not forget his stranger friends on the other side of the Atlantic, nor abandon the idea of visiting them at a future day.

New works from his prolific brain followed in rapid succession. "Fossil Mollusks," "Tertiary Shells," "Living and Fossil Echinoderms," "Recherches sur les Poissons Fossiles," and a "Monograph on the Fossil Fishes of the Old Red Sandstone," were among his productions before he removed to America. To prepare so many and large works required an incredible amount of labor and research outside of his teaching in

the institution. His researches extended throughout Europe, even into other countries, the expense of which he could meet only by practising the closest economy, and living in the simplest manner.

Invitations from the most learned Americans continued to reach him, urging him to visit their land. As soon as he could, he began to arrange a visit, which was not an easy task for one so involved in teaching, writing, and investigating. He resigned his professorship that he might have more time to complete and bring out important works on his hands. At last, he was ready to sail for the New World. It was necessary for him to spend a few weeks in England before his departure to America; so that it was September, 1846, when he sailed for this land. As he intended to return after a few months, his family remained in France, at the house of Mrs. Agassiz's brother, Alexander Braun.

A warmer reception was never accorded to a scientist from abroad than was tendered to Professor Agassiz. His arrival was heralded over the land, creating a lively interest among men of learning, and, indeed, in all literary circles. College professors were on the alert to welcome him, and high officials of state vied with each other to do him honor.

Arrangements were made with him, before he left Switzerland, to give a course of lectures before the Lowell Institute, in December, upon the "Plan of Creation, particularly as related to the Animal Kingdom." The lecturer was somewhat anxious about his success because he could speak the English language but imperfectly. But his first lecture settled that mat-

ter; it was a complete success. There was a fascination about his speech and manner that carried his large and intelligent audience from the start. Each lecture won popularity for him. He was but thirty-nine years of age, and yet was ranked among the best scholars of that day. As a naturalist, he stood at the head. No doubt this fact alone created a deep impression in his favor, investing his utterances with authority, such as only the oldest and wisest professors carry. His first course of lectures created a deep and wide-spread interest in his work as a naturalist; and, when they were concluded, immediate steps were taken to secure another course on "The Glaciers." The necessary expense was paid by private subscriptions, and the money was readily raised. The second course of lectures was enjoyed by many even more than the first.

Invitations to lecture poured in upon him from all quarters, only a limited number of which he could accept. He was glad to lecture when he could, that he might have the means to push his scientific investigations to the utmost. It was for this purpose that he visited the United States, and for this the King of Prussia had forwarded a liberal donation to him. But the more money, the more thorough and extended his researches. . . .

He wrote to Chancellor Favargez as follows: —

"Never did the future look brighter to me than now. If I could for a moment forget that I have a scientific mission to fulfil, to which I will never prove recreant, I could easily make more than enough by lectures which would be admirably paid and are urged upon me, to put me completely at my ease hereafter.

But I will limit myself to what I need in order to repay those who have helped me through a difficult crisis, and that I can do without even turning aside from my researches. Beyond that, all must go again for science — there lies my true mission."

The same enthusiasm that inspired his youth to great endeavors, the same consecration to a single purpose, and the same indifference to financial receipts except as a means of advancing science, appear in the foregoing extract that we have seen all along from the opening of his career.

This fact recalls another, after he had become absorbed, soul and body, in his Museum of Natural History at Cambridge. A lecture committee waited upon him to secure a course of lectures from him in their city. After listening to their appeal, and receiving an offer of three hundred dollars from them for each lecture, he replied, "I cannot afford to turn aside from my work here and lecture for money."

Every facility was provided for him to pursue his studies in this country. Dr. Bache was superintendent of the United States Coast Survey, and his steamer was offered to him without charge. He could scour the coast, from the woods of Maine to the "Florida Reefs," with his assistants and artists on board. He pushed his investigations, not only on the coast, but far back into the interior, wherever science could be benefited by his inquiries.

So great interest was awakened in natural history, that in 1847 a "scientific school" was established in Cambridge, and the chair of natural history offered to Professor Agassiz. The school was founded through

the generosity of the Hon. Abbott Lawrence, and hence was called the "Lawrence Scientific School." It was in April, 1848, that he removed to Cambridge and entered upon the labors of his professorship. No provision had been made for his collections, and he was obliged to resort to a deserted boat-house on the banks of Charles River to found his Museum of Comparative Zoölogy. By nailing pine boards upon the walls for shelves, he succeeded in establishing quite a respectable museum in the old building, where his rapidly increasing collections were stored. This little boat-house exposition grew into the famous Museum of Comparative Zoölogy, under his almost magical touch. Money was unexpectedly contributed, in small and large amounts, for the erection of a fine building. The Legislature appropriated twenty-five thousand dollars for this object; and one hundred thousand more was given for it, on Agassiz's birthday, by interested friends. In due time the noble edifice was completed — an ornament to the city, and a grand tribute to science. Before the death of Agassiz, his museum had become the most famous one of the kind in all the world.

Agassiz had now remained longer in this country than he expected when he left his native land. Several causes combined to prolong his stay. First, his wife had died; secondly, political troubles in Switzerland, which interrupted the kind of scientific work that awaited his return; and third, the importunity of the American people that he should make their country his permanent home. Besides, in 1850, he married Elizabeth Cabot Cary of Boston, a sister of Professor C. C. Felton of Harvard College. His son, too, a youth of

fifteen, had arrived in Cambridge, and the daughters soon followed him. Again the family were united, and the eminent professor had what he valued more than wealth or fame — a home.

Volume after volume appeared from his pen, as the months passed; but his great work was "Contributions to Natural History of the United States," in ten large octavo volumes. At first, it was thought that the large expense of the work would hinder its circulation. But, to the surprise of the author, orders for it poured in from every quarter — a rare compliment to Agassiz as a scholar and naturalist. Its publication was a notable success. . . .

His characteristic modesty needs additional mention. He seemed not to realize his greatness. Tributes to his attainments appeared to surprise him. What he had attained was very insignificant to him in comparison with what remained to be known. He had only picked up a few pebbles on the shore, while the great ocean of science tempted him to fathom its mysteries. He claimed only the beginning of knowledge in his department, and often said that many things are uncertain now, even about laws and facts that are known.

An amusing incident, that illustrates the foregoing remarks, was related to the author at Cotuit Port, Mass. One or two years before his death, Agassiz spent four weeks there, studying fishes in the waters of that vicinity, and collecting specimens for his museum. One day, at the hotel where he stopped, a discussion on different kinds of fishes arose between him and several of the citizens. One citizen called his attention to a kind of fish that was always seen in schools, swimming with

one fin out of water, and inquired what the professor knew of them. He replied that he knew nothing, for he had never seen them. One citizen asked him, "Which fin is out of water, the back or tail fin?" Without the least hesitation he replied, "Oh, it must be the back fin," answering, no doubt, according to some general theory in his mind.

A boy, ten years old, son of one of the citizens, — a bright, observant little fellow, — was standing by, taking in every word of the distinguished naturalist; and he could not contain himself, so full of the subject was his soul. He interrupted by saying, "I think it is the tail fin: I've seen 'em." The men laughed, and Professor Agassiz laughed with them, and patted the boy on his head, commending his sharp observation, and expressing the hope that he would know all about it in his manhood.

The boy was not satisfied with the turn of affairs. On the next day he went down to the wharf, a few rods back of the hotel, and laid himself flat on his face to watch for a school of the fish. They were not plenty, but he had seen them in the harbor, when they swam directly under the wharf. He watched several hours, but no fish appeared. On the next day he went thither and watched equally long, but he only had disappointment for his pains. Undismayed, he repaired to the same spot on the third day, and, after the lapse of an hour, was rewarded by the appearance of the fishes he was seeking. The school swam directly under the wharf, in full view of his two large blue eyes. Imagine his interest and excitement to make sure whether the back or tail fin was out of water. It was

the *tail* fin, he was positive of it. A second sharp, square look convinced him that the professor was wrong.

Quick as his feet could carry him to the hotel, he reported to Agassiz, "A school of them fish is in the harbor." The professor hurried down to the wharf, and saw, with his own eyes, the "tail fin out of water." The boy's fact had upset his theory; and he complimented the lad for his intelligent observation. No one enjoyed the issue more than he. The episode had added another fact to his museum of facts — a tail fin can be out of water. And the whole affair was in harmony with what he was ever teaching — that many things are uncertain, even about things we know. Great talents and learning are always modest.

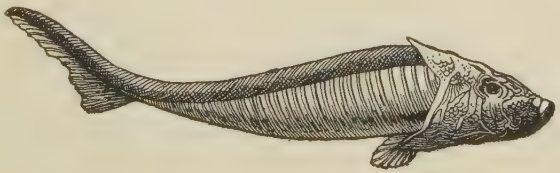
In the summer before his death, Professor Agassiz inaugurated the system of "summer institutes" that is now so marvellous a method for teachers to advance themselves in studies essential to their calling. Before his plans had matured, when he had not even determined upon a location, except that the institute should be somewhere on the sea-coast, that students could find necessary recreation while they pursued their studies, a wealthy gentleman in New York City settled the question by a generous offer. He owned a summer residence on the island of Penikese, in Buzzard's Bay, and he offered it to Agassiz for his school, and fifty thousand dollars with which to equip it. He had only seen in the papers that the professor would start such a school, and that announcement moved him to this noble act.

Agassiz was taken by surprise. He began to think

that the American way of endowing important enterprises was somewhat in advance of the European. He accepted the offer with a heart overflowing with gratitude, and the "summer school" was opened, and conducted with such remarkable success, that it became the mother of hundreds, and perhaps thousands, of similar schools in the United States and Europe.

The professor needed absolute rest when he assumed the exhausting labors of that summer institute. He was an overworked, tired-out man when he entered upon his work at Penikese. Nevertheless he continued his teaching to the close of the session, returning to Cambridge with health very much impaired.

He delivered a course of lectures in the Scientific School in October, and commenced a series of articles in the *Atlantic Monthly* upon "Evolution and Permanence of Type." On the second day of December he was called to lecture for the Massachusetts Board of Agriculture at Fitchburg on the "Structural Growth of Domesticated Animals." This proved to be his last public effort. On the sixth he left the museum for home, complaining of great exhaustion. He took to his bed, from which he did not rise again. He passed away peacefully on the fourteenth of December [1873], surrounded by his sorrowing family and many friends who gathered to sympathize with them — a martyr to science!



SIR RICHARD ARKWRIGHT

By R. A. DAVENPORT.

Richard Arkwright.

RICHARD ARKWRIGHT, the son of poor parents, and the youngest of thirteen children, was born on the 23d of December, 1732, at Preston, in Lancashire. Such was the poverty of his parents that they could afford to give him scarcely any education; indeed, it was not till late in life that he learned to write his own language with anything like grammatical correctness, and in a legible hand. He was brought up to the humble trade of a barber, at Kirkham and Preston, and when he set up as master, he established himself at Bolton. Of the first eight-and-twenty years of his life, nothing more is certainly known.

The only other circumstance which is recorded concerning that period relates to his commencing business, and I will not vouch for the truth of it. In many of

the Lancashire towns, the underground floor, or cellar as it is called, is inhabited by a decent class of people. At his outset, Arkwright is said to have taken one of these cellars, and put up a board at the entrance, on which was inscribed, "Come to the subterraneous barber; he shaves for a penny." This invitation was so attractive, that his customers became numerous, and his rivals were obliged to drop their price to prevent their shops from being deserted. Arkwright, however, was not to be outdone; and he immediately diminished his charge to a half-penny. This dogged determination not to be foiled gives to the story an appearance of being fact; for it is in keeping with the character of Arkwright.

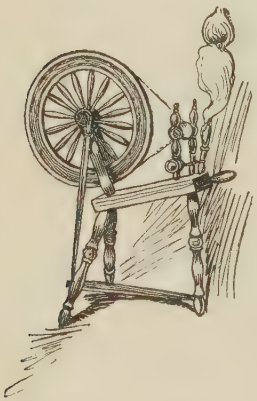
"His natural disposition," says Mr. Baines, "was ardent, enterprising and stubbornly persevering; his mind was as coarse as it was bold and active; and his manners were rough and unpleasing."

Quitting the trade of a barber, he became, about the year 1760 or 1761, an itinerant dealer in hair. Wigs were then generally worn; and the immense quantity of hair which was required for them was collected by travelling from place to place. . . . In carrying on this business, Arkwright enjoyed a considerable advantage over his competitors; as he not only had the reputation of keeping a better article than they did, but was likewise in possession of a secret chemical process for dyeing hair, which, of course, enabled him to supply purchasers with any shade of color that was wanted. In this pursuit he is said to have amassed a little property. His secret of dyeing hair is usually believed to have been a discovery of his own, and it probably

was so; but the fact is doubted by some persons, on the ground that he never studied chemistry. . . .

Arkwright's first effort in mechanics is said to have been that which has occupied and eluded so many young adventurers in science — the discovery of a perpetual motion. Yet, even this may have been of benefit to him, by compelling him to meditate upon all possible movements and combinations of them. That he was for years absorbed in schemes and experiments of various kinds is certain; and it is equally so, that they reduced him to a state of poverty. . . .

In 1767, Arkwright became acquainted, at Warrington, with a man named Kay, who was a clock-maker. As he himself was not a practical mechanic, he applied to this man to perform some manual labor for him, with respect to a machine on which he was engaged, probably the very invention which immortalized him. Such, from the statement made by him in his printed "Case," would appear to be the fact; for he there asserts that, after "*many years*' intense and painful application, he invented about the year 1768, his present method of spinning cotton."



Spinning-Wheel.

His connection with Kay was ultimately injurious to his fame and fortune, as that worthy person, after a lapse of fifteen years, and his having been dismissed from Arkwright's employment, and threatened with a criminal prosecution by him, had the

boldness to come into a court of justice, and swear that the invention of spinning by rollers belonged to a man named Highs; that the secret had been entrusted to him by Highs; and that he had been guilty of betraying it to Arkwright. . . .

Kay, as being necessary to him in the fabrication of the machine, was taken into the service of Arkwright, and bound himself to serve him, for a certain time and salary. There were some parts of the machine which Kay was unable to execute; in consequence of which, Arkwright was under the necessity of applying for assistance to Mr. Peter Atherston, an instrument-maker. The inventor's appearance, however, was so indicative of a slenderly furnished purse, that Atherston refused to undertake the construction. But, "he agreed to lend Kay a smith and watch-tool-maker, to make the heavier part of the engine, and Kay undertook to make the clock-work part of it, and to instruct the workman. In this way Mr. Arkwright's first engine, for which he afterwards took out a patent, was made."

The machine was now completed, but Arkwright had no money to bring it into play, and without money the engine was a body without a soul. At Preston, his native place, Arkwright had a friend who might assist him; this friend was a Mr. Smalley, a spirit-merchant and painter. To Preston, therefore, he repaired; and there his machine was fitted up in the parlor of the Grammar-school-house, which, at the request of Smalley, was lent for that purpose by the head-master. Smalley had sense enough to perceive the merit of the invention, and he resolved to lend both his purse and his influence to bring the machine into operation.

To bring forward such an obnoxious discovery in Lancashire was out of the question ; for though, at that period, the Lancashire women might as justly be entitled as they now are to the appellation of witches, the Lancashire men had abundantly proved that they were not conjurors. The fate of poor Hargreaves was before Arkwright and his friend, and they prudently determined not to run the risk of being treated in the same manner. They consequently removed to Nottingham, in company with Kay. There they entered into a negotiation with Messrs. Wright, bankers, and succeeded in obtaining from them an advance of capital, on condition of their ceding a share of the profits.

Arkwright and Need.

The Wrights, however, were not willing to venture too far in the speculation. Finding that the machine was not brought into working order so rapidly as they had expected, they desired Arkwright to find some one who would repay them, and stand in their place. They

also suggested, that Mr. Need of Nottingham, who was concerned in other patent discoveries, and was a partner in the stocking-patent with Mr. Strutt of Derby, would be a likely person to enter into a connection with him. Arkwright accordingly applied to Need, who expressed his willingness to venture, if Strutt, to whom he referred him, thought well of the machine. On examining the model, Strutt, who was a man of great mechanical knowledge, perceived at a glance the value of the invention. All that was wanting to make it perfect was, he said, the adaptation of some of the wheels to each other, which, from a lack of practical skill, the inventor had failed to accomplish. The defect was speedily remedied, and a partnership was then entered into between Need, Strutt, and Arkwright. In 1769, a patent was taken out by the inventor.

The first spinning-mill on the new principle was erected at Nottingham, and was worked by horse-power. This mode was soon found to be too expensive, and perhaps too limited, for the purpose. The gigantic energy of steam had not yet been engaged in the service of manufactures, though the time was fast approaching when it was to be thus applied. Water was therefore of necessity resorted to; and, in 1771, a factory, on a far larger scale than the first, was built on the river Derwent, at Cromford, near Wirksworth in Derbyshire. . . .

The Lancashire cotton manufacturers were willing to injure themselves, provided they could injure him. Though his yarn was by far the best in the market, they formed a combination against it, and refused to be purchasers; hoping by this means to effect his ruin.

Their plan, though it did not fully answer, was productive of no trifling annoyance. A heavy stock of yarn was accumulated in the warehouses of Arkwright and his partners; and it was not till after the lapse of five years, and an expenditure of twelve thousand pounds in machinery and buildings, that they derived any profit from their capital and labors. Being thus shut out of the market, they were compelled to become manufacturers on their own account. They first employed their yarn in the weaving of stockings; for which purpose it was found to be so admirably calculated, that it soon put an end to the use of hand-spun cotton, and entirely supplanted thread stockings, which till then had been preferred.

In 1773, they began to apply their cotton warp to the making of calicoes, and with complete success. But when they had fabricated a large stock of goods, and received extensive orders for them, their progress was suddenly arrested. An act was found to exist, which levied an additional duty of three-pence a yard on such articles when exported, and prohibited the use of them at home, by making linen warp an essential part of legal calicoes. This act was enforced by the officers of excise against the calicoes of Arkwright and his partners; and thus a law, which was originally intended to operate against the printing of Indian calicoes, was converted into an instrument for the destruction of an important English manufacture. The commissioners of exercise were applied to for relief, but without effect; and there was no other resource than an appeal to the legislature. Here Arkwright was met by the determined opposition of his Lancashire enemies. With a

mixture of malignity and absurdity, which excites at once anger and laughter, they pertinaciously contended against the repeal of the additional duty and the prohibition. Their laudable exertions were, however, thrown away, except in as far as they compelled Arkwright and his partners to expend a large sum of money, before redress could be obtained. Common-sense and justice were finally victorious. In the session of 1774, the legislature passed an act, which sanctioned the fabricating of "stuffs wholly made of the raw cotton wool," and subjected them to a duty of only three-pence a square yard on their being printed.

In December, 1775, Arkwright took out a new patent for a series of machines, for the purposes of carding, drawing, and roving. By these additions his system was rendered complete. At length, Arkwright began to reap the fruits of his perseverance and skill. "When this admirable series of machines was made known," says Mr. Baines, "and by their means yarns were produced far superior in quality to any before spun in England, as well as lower in price, a mighty impulse was communicated to the cotton manufacture. Weavers could now obtain an unlimited quantity of yarn at a reasonable price; manufacturers could use warps of cotton, which were much cheaper than the linen warps formerly used. Cotton fabrics could be sold lower than had ever before been known. The demand for them consequently increased. The shuttle flew with fresh energy, and the weavers earned immoderately high wages. Spinning-mills were erected to supply the requisite quantity of yarn.

"The fame of Arkwright resounded throughout the

land; and capitalists flocked to him to buy his patent machines, or permission to use them." For that permission, a certain sum per spindle was paid to him. Arkwright likewise enhanced his gains by taking shares in mills, and by erecting mills of his own in various places, particularly in Derbyshire and at Manchester, and Birkacre, near Chorley, in Lancashire. The sum which the partnership expended in building mills, previously to the year 1782, fell little short of forty thousand pounds.

Although every man, woman, and child, who could assist in spinning, was fully employed at much higher wages than were ever earned before, and although provisions were cheap, the multitude saw with an evil eye the progress of machinery. The dislike of the new inventions was fostered by persons who ought to have known better — men of the middle and upper classes, who were alarmed by selfish fears lest they should suffer from the workmen being eventually thrown out of work and upon the poor-rates. In 1779, this spirit burst forth into action. The mob rose in a sort of crusade against machinery, and prowled over the country for many miles round Blackburn, destroying jennies, water-frames, and everything of the kind that was moved by water or horses. There was, however, one remarkable difference between this and their former outbreak. When they were hunting down the unfortunate Hargreaves, not a single jenny was left unbroken; now, they are said to have spared the jennies which had not more than twenty spindles. This was at least a step in advance towards rationality.

While the rioters were thus occupied, the civil autho-

rities were in many instances completely inert; and there were not a few individuals who had so little sense of their duty to their neighbors and to society, that they left no stone unturned to screen the delinquents from punishment.

"This devastating outrage," says Mr. Baines, "left effects more permanent than have usually resulted from such commotions. Spinners, and other capitalists, were driven from the neighborhood of Blackburn to Manchester and other places; and it was many years before cotton-spinning was resumed at Blackburn. Mr. Peel, a skilful and enterprising spinner and calico-printer, having had his machinery at Altham thrown into the river, and been in personal danger from the fury of the mob, retired in disgust to Burton, in Staffordshire, where he built a cotton-mill on the banks of the Trent, and remained there some years. A large mill, built by Arkwright, at Birkacre, near Chorley, was destroyed by a mob, in the presence of a powerful body of police and military, without any of the civil authorities requiring their interference to prevent the outrage."

Arkwright's mill did not fall without a struggle. Its inmates seem to have possessed some of their master's indomitable spirit. The rioters were driven back on the first day, with the loss of two men killed, and eight wounded; and it was not till they returned, with greatly increased numbers, that they accomplished their purpose.

The destruction of Arkwright's property at Birkacre was followed, after an interval of two years, by a much heavier blow. His machines had come very extensively into use, and their merit was no longer disputed; but

to pay for the privilege of using them seemed a hardship to men whose love of lucre was stronger than their honesty of principle. The divine maxim that "the laborer is worthy of his hire," was beyond their comprehension. They thought it a more pleasant and compendious process to steal than to purchase; and as men, when they have an interest in doing wrong, are generally but too successful in cheating and lulling their consciences, they found a defence of their conduct in reports which were spread, that Arkwright was not an inventor. On this pretext, several persons manufactured with his machines, without obtaining a license. As serious injury to him must be the result of his winking at this piratical infringement of his rights, he resolved to put an end to it.

With this view, in the year 1781, he brought nine actions against the pirates. Strong in their numbers, the great body of the spinners combined together, and employed eminent counsel to vindicate their encroachments. The first cause which came on was that of Colonel Mordaunt; his advocates were Bearcroft and Erskine. In this case, the second patent was the object of litigation. No attempt was made to prove that Arkwright was not the inventor of the machines in question; the defence rested solely on the narrow legal ground that the specification was obscure and unintelligible, and consequently the patent was void. In law, this was a good plea; but, looking at it in a moral and honorable point of view, it was a mere piece of chicanery. A robber is not the less a robber, because a flaw in the indictment procures for him an acquittal. But, such as it was, the plea sufficed to answer its pur-

pose; the specification was decided to be defective; and the pirates obtained a verdict. The other eight actions were, of course, withdrawn by Arkwright. . . .

Arkwright remained apparently quiescent till the beginning of 1785. But, in reality, he was not idle; he was busy in collecting the opinions of mechanical artists, as to the practicability of constructing his machine, from the description which he had given of it. Fortified with their evidence, he commenced another action which came on for trial upon the 17th of February. Lord Loughborough summed up favorably, and Arkwright obtained a verdict.

This was a heavy blow to the cotton-spinners, who, for the last four years, had been making use of his invention. The number of them had largely increased since the first trial, insomuch, that three hundred thousand pounds had been invested, and thirty thousand persons were now employed, in the buildings and machinery of establishments erected in defiance of the patent. This fact was subsequently urged by their counsel, as a reason for destroying Arkwright's monopoly. It was a singular argument, that, because an enormous robbery had been committed, the victim, instead of obtaining redress, ought to be punished by inflicting upon him a heavier loss.

The hostile cotton-spinners had, according to their own showing, too much at stake not to induce them to move heaven and earth to demolish the patent; and they accordingly once more combined firmly together, to effect their purpose. Neither money, nor industry, nor contrivance, was spared. This time they were the assailants; their mode of proceeding was by writ of *scire*

facias, ostensibly in the name of the crown, to try the validity of the patent.

The cause came on for trial before Judge Buller and a special jury, on the 25th of June, 1785. Four grounds of opposition were taken up by Mr. Bearcroft, who was their leading counsel: namely, that the patent was a great inconvenience to the public; that when the patent was granted, the invention was not a new one; that the invention was not Arkwright's; and that the specification was imperfect. The plea that the patent was "a great inconvenience to the public," is a happy specimen of the jargon and latitudinarian style of assertion which find such ready admission into legal pleadings. On former occasions, the obscurity with which the invention was described had been the point relied upon for overthrowing the patent; in this instance, the plan of attack was changed, and the system upon which their dependence was chiefly placed was, that of denying to Arkwright the merit of being an inventor. To sustain the charge against the patentee, witnesses were brought forward to testify, that other persons had originated the improvements in the carding-machine; and Highs and Kay were examined to prove, that the former invented the mode of spinning by rollers, and that Kay, who was employed to make a model for Highs, had treacherously betrayed the secret to Arkwright.

Highs, it must be observed, had suffered his claims to remain dormant for sixteen years; and Kay was a man whose evidence ought to have been received with much suspicion, since, by his own account, he stood self-convicted of an infamous breach of confidence: he had, besides, been dismissed from Arkwright's service, and

threatened by him with a prosecution for felony. The trial lasted from nine o'clock in the morning till half-past twelve at night, nearly sixteen hours; much conflicting evidence had, of course, been produced, much that required the most careful sifting and weighing; yet, without a moment bestowed on considering and consulting, the jury returned a verdict for the crown, thus annihilating the patent. Admirable as is the institution of trial by jury, and much as it ought to be cherished, it must be confessed, that juries now and then give such singular verdicts, that the old joke of finding a man guilty of manslaughter for stealing a pair of breeches scarcely looks like an exaggeration.

In the next term, Arkwright applied for a new trial. His counsel urged that they had been taken by surprise on the former occasion, but that they were now provided with affidavits, by which the evidence of Kay and others as to originality of invention, was decidedly contradicted. The motion was, however, refused. With more ease than elegance of language, Judge Buller, who seems to have acted with a partisan

Judge Buller.

spirit, expressed his conviction, that at the trial "the defendant had not a leg to stand upon." But as this might not appear to be a conclusive reason for refusing the motion, it was added, that whatever might be the fact as to originality, the cloudiness of the specification was sufficient to justify the verdict. . . .

In Lancashire, and especially at Manchester, the defeat of Arkwright was a subject of great rejoicing. In those parts he was no favorite; perhaps on the principle that "they never pardon who have done the wrong." At all events, *he* did not afford a proof that "forgiveness to the injured does belong"; he retorted their dislike, and labored to raise up rivals against them. With this view, he gave as much advantage as possible to the Scotch spinners, and even formed a partnership with Mr. Dale, the proprietor of the Lanark mills. It would appear that some vulgar allusions had been made to his original occupation; for, in speaking of his connection with Dale, he sarcastically observed, "that he would find a *razor* in Scotland to *shave* Manchester."

Though so great a source of profit had been cut off by the result of the last trial, the fortune of Arkwright continued rapidly to accumulate. His partnership with the Strutts terminated about 1783, after which event the works at Cromford remained in his own hands, and he was, besides, connected with many other establishments. For several years the price of yarn was fixed by him; his prices being conformed to by all the other cotton-spinners. Under his superintending eye all his concerns went on with clock-work regularity. Into every department of his extensive works he introduced an invariable system of order and arrangement; so perfect

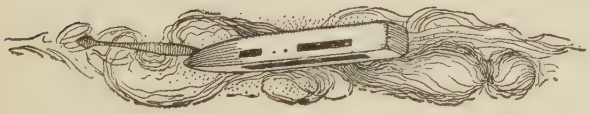
in all its parts that it was universally adopted by the manufacturers, and, during the lapse of more than half a century, has not, in any material point, been found to require alteration.

When he had once gained a firm footing, such a man could scarcely fail to prosper. "The most marked traits in the character of Arkwright," says Mr. Baines, who has no undue partiality for him, "were his wonderful ardor, energy, and perseverance." He commonly labored in his multifarious concerns from five in the morning till nine at night; and when considerably more than fifty years of age — feeling that the defects of his education placed him under great difficulty and inconvenience in conducting his correspondence, and in the general management of his business — he encroached upon his sleep, in order to gain an hour each day to learn English grammar, and another hour to improve his writing and orthography! He was impatient of whatever interfered with his favorite pursuits; and the fact is too strikingly characteristic not to be mentioned, that he separated from his wife not many years after their marriage, because she, convinced that he would starve his family by scheming when he should have been shaving, broke some of his experimental models of machinery. Arkwright was a severe economist of time; and, that he might not waste a moment, he generally travelled with four horses, and at a very rapid speed. His concerns in Derbyshire, Lancashire, and Scotland were so extensive and numerous, as to show at once his astonishing power of transacting business, and his all-grasping spirit. In many of these he had partners, but he generally managed in such a

way, that, whoever lost, he himself was a gainer. So unbounded was his confidence in the success of his machinery, and in the national wealth to be produced by it, that he would make light of discussions on taxation, and say, that he would pay the national debt! His speculative schemes were vast and daring; he contemplated entering into the most extensive mercantile transactions, and buying up all the cotton in the world, in order to make an enormous profit by the monopoly; and from the extravagance of these designs, his judicious friends were of opinion, that if he had lived to put them in practice, he might have overset the whole fabric of his prosperity." . . .

In those days it was not the practice to confer heraldic titles upon inventors and scientific men; and therefore the man who had given to his native land the means of pushing one branch of its manufactures and commerce to an almost boundless extent, might have lived and died plain Mr. Arkwright, had not an insane female made an abortive attempt on the life of the British monarch. On this occasion loyal addresses were, as it was right they should be, poured in from all quarters, to congratulate his majesty on his escape. The dignity of knighthood was so lavishly bestowed upon the bearers of these addresses, that the title became almost ludicrous, and those who obtained it were known by the appellation of Peg Nicholson's knights. Arkwright was one of those upon whom this doubtful honor was conferred. Having in 1786, been appointed high sheriff of Derbyshire, he was deputed to present the county address; and, in consequence, became Sir Richard Arkwright. . . .

Arkwright did not long enjoy the title which had fallen on him by chance. For many years he had suffered under a severe asthmatic complaint, which, however, had never been allowed to suspend his pursuits. His incessant attention to business, and the sedentary life which was the result of it, at length brought on a complication of disorders, of which he died, in the sixtieth year of his age, at Cromford, on the 3d of August, 1792. The fortune which he left is said to have amounted to the sum of half a million sterling. "No man," justly observes Mr. M'Culloch, "ever better deserved his good fortune, or has a stronger claim on the respect and gratitude of posterity. His inventions have opened a new and boundless field of employment; and while they have conferred infinitely more benefit on his native country than she could have derived from the absolute dominion of Mexico and Peru, they have been universally productive of wealth and enjoyments."



JOHN BUNYAN

By JOHN G. WHITTIER.

John Bunyan.

WHO has not read "Pilgrim's Progress"? Who has not, in childhood, followed the wandering Christian on his way to the Celestial City? Who has not laid at night his young head on his pillow, to paint on the walls of darkness pictures of the Wicket Gate and the Archers, the Hill of Difficulty, the Lions and Giants, Doubting Castle and Vanity Fair, the sunny Delectable Mountains and the Shepherds, the Black River and the wonderful glory beyond it: and at last fallen asleep, to dream over the strange story, to hear the sweet welcomings of the sisters of the House Beautiful, and the song of birds from the window of that "upper chamber which opened towards the sunrising?" And who, looking back to the green spots in his childish experiences, does not bless the good Tinker of Elstow?

And who that has re-perused the story of the Pilgrim at a maturer age, and felt the plummet of its truth

sounding in the deep places of the soul, has not reason to bless the author for some timely warning or grateful encouragement? Where is the scholar, the poet, the man of taste and feeling, who does not, with Cowper,

> "Even in transitory life's late day,
> Revere the man whose Pilgrim marks the road,
> And guides the Progress of the soul to God?" . . .

Bunyan's "Grace Abounding," as well as "Pilgrim's Progress," was written in Bedford prison, and was designed especially for the comfort and edification of his "children whom God had counted him worthy to beget in faith by his ministry." In his introduction he tells them, that, although taken from them, and tied up, "sticking as it were, between the teeth of the lions in the wilderness," he once again, as before, from the top of Shemer and Hermon, so now, from the lion's den and the mountain of leopards, would look after them with fatherly care and desires for their everlasting welfare. "If," said he, "you have sinned against light; if you are tempted to blaspheme; if you are drowned in despair; if you think God fights against you; or if Heaven is hidden from your eyes, remember it was so with your father. But out of all the Lord delivered me."

Bedford Jail.

He gives no dates; he affords scarcely a clew to his

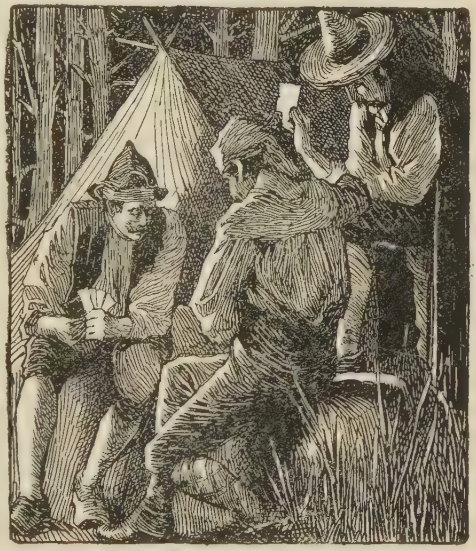
localities; of the man, as he worked, and ate, and drank, and lodged, of his neighbors and contemporaries, of all he saw and heard of the world about him, we have only an occasional glimpse, here and there, in his narrative. It is the story of his inward life only that he relates. What had time and place to do with one who trembled always with the awful consciousness of an immortal nature, and about whom fell alternately the shadows of hell and the splendors of heaven? We gather, indeed, from his record, that he was not an idle on-looker in the time of England's great struggle for freedom, but a soldier of the Parliament, in his young years, among the praying sworders and psalm-singing pikemen, the Greathearts and Holdfasts whom he has immortalized in his allegory; but the only allusion which he makes to this portion of his experience is by way of illustration of the goodness of God in preserving him on occasions of peril.

Bunyan's Cottage at Elstow.

He was born at Elstow, in Bedfordshire, in 1628; and, to use his own words, "his father's house was of the rank which is the meanest and most despised of all the families of the land. His father was a tinker, and the son followed the same calling, which necessarily brought him into association with the lowest and most depraved classes of English society. The estimation in

which the tinker and his occupation were held, in the seventeenth century, may be learned from the quaint and humorous description of Sir Thomas Overbury.

"The tinker," saith he, "is a movable, for he hath no abiding in one place; he seems to be devout, for his life is a continual pilgrimage, and sometimes, in humility, goes barefoot, therein making necessity a virtue; he is a gallant, for he carries all his wealth upon his back; or a philosopher, for he bears all his substance with him. He is always furnished with a song, to which his hammer, keeping tune, proves that he was the first founder of the kettle-drum; where the best ale is, there stands his music most upon crochets. The companion of his travel is some foul, sunburnt quean, that, since the terrible statute, has recanted gipsyism, and is turned pedlaress. So marches he all over England, with his bag and baggage; his conversation is irreprovable, for he is always mending. He observes truly the statutes, and therefore had rather steal than beg. He is so strong an enemy of idleness, that in mending one hole he would rather make three



Travelling Tinkers.

than want work; and when he hath done, he throws the wallet of his faults behind him. His tongue is very voluble, which, with canting, proves him a linguist. He is entertained in every place, yet enters no farther than the door, to avoid suspicion. To conclude, if he escape Tyburn and Banbury, he dies a beggar."

Truly but a poor beginning for a pious life was the youth of John Bunyan. As might have been expected, he was a wild, reckless, swearing boy, as his father doubtless was before him. . . .

At an early age he appears to have married. His wife was as poor as himself, for he tells us that they had not so much as a dish or spoon between them; but she brought with her two books on religious subjects, the reading of which seems to have had no slight degree of influence on his mind. He went to church regularly, adored the priest and all things pertaining to his office, being, as he says, "overrun with superstition." On one occasion, a sermon was preached against the breach of the Sabbath by sports or labor, which struck him at the moment as especially designed for himself; but by the time he had finished his dinner, he was prepared to "shake it out of his mind, and return to his sports and gaming."

"But the same day," he continues, "as I was in the midst of a game of cat, and having struck it one blow from the hole, just as I was about to strike it a second time, a voice did suddenly dart from Heaven into my soul, which said, 'Wilt thou leave thy sins and go to heaven, or have thy sins and go to hell?' At this, I was put to an exceeding maze; wherefore, leaving

my cat upon the ground, I looked up to heaven, and it was as if I had, with the eyes of my understanding, seen the Lord Jesus look down upon me, as being very hotly displeased with me, and as if he did severely threaten me with some grievous punishment for those and other ungodly practices.

"I had no sooner thus conceived in my mind, but suddenly this conclusion fastened upon my spirit (for the former hint did set my sins again before my face), that I had been a great and grievous sinner, and that it was now too late for me to look after Heaven; for Christ would not forgive me nor pardon my transgressions. Then, while I was thinking of it, and fearing lest it should be so, I felt my heart sink in despair, concluding it was too late; and therefore I resolved in my mind to go on in sin; for, thought I, if the case be thus, my state is surely miserable; miserable if I leave my sins, and but miserable if I follow them; I can but be damned; and if I must be so, I had as good be damned for many sins as be damned for few."

The reader of "Pilgrim's Progress" cannot fail here to call to mind the wicked suggestion of the Giant to Christian, in the dungeon of Doubting Castle.

"I returned," he says, "desperately to my sport again; and I well remember, that presently this kind of despair did so possess my soul, that I was persuaded I could never attain to other comfort than what I should get in sin; for Heaven was gone already, so that on that I must not think; wherefore I found within me great desire to take my fill of sin, that I might taste the sweetness of it; and I made as much haste as I could

to fill my belly with its delicates; lest I should die before I had my desires; for that I feared greatly. In these things, I protest before God, I lie not, neither do I frame this sort of speech; these were really, strongly, and with all my heart, my desires; the good Lord, whose mercy is unsearchable, forgive my transgressions."

One day, while standing in the street, cursing and blaspheming, he met with a reproof which startled him. The woman of the house in front of which the wicked young tinker was standing, herself, as he remarks, "a very loose, ungodly wretch," protested that his horrible profanity made her tremble; that he was the ungodliest fellow for swearing she had ever heard, and able to spoil all the youth of the town who came in his company. Struck by this wholly unexpected rebuke, he at once abandoned the practice of swearing; although previously he tells us that "he had never known how to speak, unless he put an oath before and another behind."

The good name which he gained by this change was now a temptation to him. "My neighbors," he says, "were amazed at my great conversion from prodigious profaneness to something like a moral life and sober man. Now, therefore, they began to praise, to commend, and to speak well of me, both to my face and behind my back. Now I was, as they said, become godly; now I was become a right honest man. But oh! when I understood those were their words and opinions of me, it pleased me mighty well; for though as yet I was nothing but a poor painted hypocrite, yet I loved to be talked of as one that was truly godly. I was proud of my godliness, and, indeed, I did all I did

either to be seen of or spoken well of by men; and thus I continued for about a twelvemonth or more."

The tyranny of his imagination at this period is seen in the following relation of his abandonment of one of his favorite sports.

"Now you must know, that before this, I had taken much delight in ringing, but my conscience beginning to be tender, I thought such practice was but vain, and therefore forced myself to leave it; yet my mind hankered; wherefore, I would go to the steeple-house and look on, though I durst not ring; but I thought this did not become religion neither; yet I forced myself, and would look on still. But quickly after, I began to think, 'How if one of the bells should fall?' Then I chose to stand under a main beam, that lay overthwart the steeple, from side to side, thinking here I might stand sure; but then I thought again, should the bell fall with a swing, it might first hit the wall, and then, rebounding upon me, might kill me for all this beam. This made me stand in the steeple door; and now, thought I, I am safe enough; for if a bell should then fall, I can slip out behind these thick walls, and so be preserved notwithstanding.

"So after this I would yet go to see them ring, but would not go any further than the steeple door. But then it came in my head, 'How if the steeple itself should fall?' And this thought ('it may, for aught I know,' when I stood and looked on) did continually so shake my mind, that I durst not stand at the steeple door any longer, but was forced to flee, for fear the steeple should fall upon my head."

About this time, while wandering through Bedford

in pursuit of employment, he chanced to see three or four poor old women sitting at a door, in the evening sun, and, drawing near them, heard them converse upon the things of God; of his work in their hearts; of their natural depravity; of the temptations of the Adversary; and of the joy of believing, and of the peace of reconciliation. The words of the aged women found response in the soul of the listener. "He felt his heart shake," to use his own words; he saw that he lacked the true tokens of a Christian. He now forsook the company of the profane and licentious, and sought that of a poor man who had the reputation of piety, but, to his grief, he found him "a devilish ranter, given up to all manner of uncleanness; he would laugh at all exhortations to sobriety, and deny that there was a God, an angel, or a spirit."

"Neither," he continues, "was this man only a temptation to me, but, my calling lying in the country, I happened to come into several people's company, who, though strict in religion formerly, yet were also drawn away by these ranters. These would also talk with me of their ways, and condemn me as 'legal' and dark; pretending that they only had attained to perfection, that they could do what they would, and not sin. Oh! these temptations were suitable to my flesh, I being but a young man, and my nature in its prime; but God, who had, as I hope, designed me for better things, kept me in the fear of His name, and did not suffer me to accept such cursed principles."

At this time he was sadly troubled to ascertain whether or not he had that faith which the Scriptures spake of. Travelling one day from Elstow to Bedford,

after a recent rain, which had left pools of water in the path, he felt a strong desire to settle the question, by commanding the pools to become dry, and the dry places to become pools. Going under the hedge, to pray for ability to work the miracle, he was struck with the thought that if he failed he should know, indeed, that he was a castaway, and give himself up to despair. He dared not attempt the experiment, and went on his way, to use his own forcible language, "tossed up and down between the devil and his own ignorance."

Soon after, he had one of those visions which foreshadowed the wonderful dream of his "Pilgrim's Progress." He saw some holy people of Bedford on the sunny side of a high mountain, refreshing themselves in the pleasant air and sunlight, while he was shivering in cold and darkness, amidst snows and never-melting ices, like the victims of the Scandinavian hell. A wall compassed the mountain, separating him from the blessed, with one small gap or doorway, through which, with great pain and effort, he was at last enabled to work his way into the sunshine, and sit down with the saints, in the light and warmth thereof.

But now a new trouble assailed him. Like Milton's metaphysical spirits, who sat apart,

> "And reasoned of knowledge, will and fate,"

he grappled with one of those great questions which have always perplexed and baffled human inquiry, and upon which much has been written to little purpose.

He was tortured with anxiety to know whether, according to the Westminster formula, he was elected to salvation or damnation. His old adversary vexed

his soul with evil suggestions, and even quoted Scripture to enforce them.

"It may be you are not elected," said the Tempter, and the poor tinker thought the supposition altogether too probable. "Why, then," said Satan, "you had as good leave off, and strive no farther; for if, indeed, you should not be elected and chosen of God, there is no hope of your being saved; for it is neither in him that willeth nor in him that runneth, but in God who showeth mercy."

At length when, as he says, he was about giving up the ghost of all his hopes, this passage fell with weight upon his spirit: "Look at the generations of old, and see; did any ever trust in God, and were confounded?"

Comforted by these words, he opened his Bible to note them; but the most diligent search and inquiry of his neighbors failed to discover them. At length, his eye fell upon them in the Apocryphal book of Ecclesiasticus. This, he says, somewhat doubted him at first, as the book was not canonical; but in the end he took courage and comfort from the passage. "I bless God," he says, "for that word; it was good for me. That word doth still oftentimes shine before my face."

A long and weary struggle was now before him. "I cannot," he says, "express with what longings and breathings of my soul I cried unto Christ to call me. Gold! could it have been gotten by gold, what would I have given for it. Had I a whole world, it had all gone ten thousand times over for this, that my soul might have been in a converted state. How lovely now was every one in my eyes, that I thought to be converted men and women! They shone, they walked

like a people who carried the broad seal of Heaven with them."

With what force and intensity of language does he portray in the following passage the reality and earnestness of his agonizing experience: —

"While I was thus afflicted with the fears of my own damnation, there were two things that would make me wonder: the one was, when I saw old people hunting after the things of this life, as if they should live here always; the other was, when I found professors much distressed and cast down, when they met with outward losses; as of husband, wife, or child. Lord, thought I, what seeking after carnal things by some, and what grief in others for the loss of them! If they so much labor after and shed so many tears for the things of this present life, how am I to be bemoaned, pitied, and prayed for! My soul is dying, my soul is damning. Were my soul but in a good condition, and were I but sure of it, ah! how rich should I esteem myself, though blessed with but bread and water! I should count these but small afflictions, and should bear them as little burdens. 'A wounded spirit who can bear!'"

He looked with envy, as he wandered through the country, upon the birds in the trees, the hares in the preserves, and the fishes in the streams. They were happy in their brief existence, and their death was but a sleep. He felt himself alienated from God, a discord in the harmonies of the universe. The very rooks which fluttered around the old church spire seemed more worthy of the Creator's love and care than himself. A vision of the infernal fire, like that glimpse of

hell which was afforded to Christian by the Shepherds, was continually before him, with "its rumbling noise, and the cry of some tormented, and the scent of brimstone."

Whithersoever he went, the glare of it scorched him, and its dreadful sound was in his ears. His vivid but disturbed imagination lent new terrors to the awful figures by which the sacred writers conveyed the idea of future retribution to the oriental mind. Bunyan's World of Woe, if it lacked the colossal architecture and solemn vastness of Milton's Pandemonium, was more clearly defined; its agonies were within the pale of human comprehension; its victims were men and women, with the same keen sense of corporeal suffering which they possessed in life; and who, to use his own terrible description, had "all the loathed variety of hell to grapple with; fire unquenchable, a lake of choking brimstone, eternal chains, darkness more black than night, the everlasting gnawing of the worm, the sight of devils, and the yells and outcries of the damned."

His mind at this period was evidently shaken in some degree from its balance. He was troubled with strange wicked thoughts, confused by doubts and blasphemous suggestions, for which he could only account by supposing himself possessed of the devil. He wanted to curse and swear, and had to clap his hands on his mouth to prevent it. In prayer, he felt, as he supposed, Satan behind him, pulling his clothes, and telling him to have done, and break off; suggesting that he had better pray to him, and calling up before his mind's eye the figures of a bull, a tree, or some other object, instead of the awful idea of God.

"He Went to Church Regularly."

He notes here, as cause of thankfulness, that, even in this dark and clouded state, he was enabled to see the "vile and abominable things fomented by the Quakers," to be errors. Gradually, the shadow wherein he had so long

> "Walked beneath the day's broad glare,
> A darkened man,"

passed from him, and for a season he was afforded an "evidence of his salvation from Heaven, with many golden seals hanging thereon in his sight." But, ere long, other temptations assailed him. A strange suggestion haunted him, to sell or part with his Saviour. His own account of this hallucination is too painfully vivid to awaken any other feeling than that of sympathy and sadness.

"I could neither eat my food, stoop for a pin, chop a stick, or cast mine eye to look on this or that, but still the temptation would come, Sell Christ for this, or sell Christ for that; sell him, sell him.

"Sometimes it would run in my thoughts, not so little as a hundred times together, Sell him, sell him; against which, I may say, for whole hours together, I have been forced to stand as continually leaning and forcing my spirit against it, less haply, before I were aware, some wicked thought might rise in my heart, that I might consent thereto; and sometimes the Tempter would make me believe I had consented to it; but then I should be as tortured upon a rack, for whole days together.

"This temptation did put me to such scares, lest I should at some times, I say, consent thereto, and be

overcome therewith, that, by the very force of my mind, my very body would be put into action or motion, by way of pushing or thrusting with my hands or elbows; still answering, — as fast as the destroyer said, Sell him, sell him, — I will not, I will not; no, not for thousands, thousands, thousands of worlds; thus reckoning, lest I should set too low a value on him, even until I scarce knew where I was, or how to be composed again.

"But to be brief; one morning, as I did lie in my bed, I was, as at other times, most fiercely assaulted with this temptation, to sell and part with Christ; the wicked suggestion still running in my mind, Sell him, sell him, sell him, sell him, sell him, as fast as a man could speak; against which, also, in my mind, as at other times, I answered, No, no, not for thousands, thousands, thousands, at least twenty times together; but at last, after much striving, I felt this thought pass through my heart, *Let him go if he will;* and I thought also, that I felt my heart freely consent thereto. Oh! the diligence of Satan! Oh! the desperateness of man's heart!

"Now was the battle won, and down fell I, as a bird that is shot from the top of a tree, into great guilt, and fearful despair. Thus getting out of my bed, I went moping into the field; but God knows, with as heavy a heart as mortal man, I think, could bear; where, for the space of two hours, I was like a man bereft of life; and, as now, past all recovery, and bound over to eternal punishment. . . .

He believed that he had committed the unpardonable sin. His mental anguish was united with bodily ill-

ness and suffering. His nervous system became fearfully deranged; his limbs trembled; and he supposed this visible tremulousness and agitation to be the mark of Cain. Troubled with pain and distressing sensations in his chest, he began to fear that his breast-bone would split open, and that he should perish like Judas Iscariot. He feared that the tiles of the houses would fall upon him as he walked the streets. He was like his own Man in the Cage in the House of the Interpreter, shut out from the promises, and looking forward to certain judgment.

"Methought," he says, "the very sun that shineth in heaven did grudge to give me light." And still the dreadful words, "He found no place for repentance, though he sought it carefully with tears," sounded in the depths of his soul. They were, he says, like fetters of brass to his legs, and their continual clanking followed him for months. Regarding himself elected and predestined for damnation, he thought that all things worked for his damage and eternal overthrow, while all things wrought for the best, and to do good to the elect and called of God unto salvation. God and all his universe had, he thought, conspired against him; the green earth, the bright waters, the sky itself, were written over with his irrevocable curse.

Well was it said by Bunyan's contemporary, the excellent Cudworth, in his eloquent sermon before the Long Parliament, that "we are nowhere commanded to pry into the secrets of God, but the wholesome advice given us is this: 'To *make* our calling and election sure.' We have no warrant from Scripture to peep into the hidden rolls of eternity, to spell out our names

among the stars. . . . Must we say that God sometimes, to exercise his uncontrollable dominion, delights rather in plunging wretched souls down into infernal night and everlasting darkness? What, then, shall we make the God of the whole world? Nothing but a cruel and dreadful *Erinnys*, with curled fiery snakes about his head, and firebrands in his hand; thus governing the world! Surely, this will make us either think there is no God in the world, if he must needs be such, or else to wish heartily there were none." It was thus at times with Bunyan. He was tempted, in this season of despair, to believe that there was no resurrection and no judgment.

One day he tells us a sudden rushing sound, as of wind or the wings of angels, came to him through the window, wonderfully sweet and pleasant; and it was as if a voice spoke to him from heaven words of encouragement and hope, which, to use his language, commanded, for the time, "a silence in his heart to all those tumultuous thoughts that did use, like masterless hell-hounds, to roar and bellow and make a hideous noise within him."

About this time, also, some comforting passages of Scripture were called to mind; but he remarks, that whenever he strove to apply them to his case, Satan would thrust the curse of Esau in his face, and wrest the good word from him. The blessed promise, "Him that cometh to me, I will in no wise cast out," was the chief instrumentality in restoring his lost peace. He says of it: "If ever Satan and I did strive for any word of God in all my life, it was for this good word of Christ; he at one end, and I at the other; oh, what

work we made! It was for this in John, I say, that we did so tug and strive; he pulled, and I pulled, but, God be praised! I overcame him; I got sweetness from it. Oh! many a pull hath my heart had with Satan for this blessed sixth chapter of John!"

Who does not here call to mind the struggle between Christian and Apollyon in the valley! That was no fancy sketch; it was the narrative of the author's own grapple with the Spirit of Evil. Like his ideal Christian, he "conquered through him that loved him." Love wrought the victory: the Scripture of Forgiveness overcame that of Hatred.

He never afterwards relapsed into that state of religious melancholy from which he so hardly escaped. He speaks of his deliverance, as the waking out of a troublesome dream. His painful experience was not lost upon him; for it gave him, ever after, a tender sympathy for the weak, the sinful, the ignorant, and desponding. In some measure, he had been "touched with the feeling of their infirmities." He could feel for those in bonds of sin and despair, as bound with them. Hence his power as a preacher; hence the wonderful adaptation of his great allegory to all the variety of spiritual conditions. Like Fearing, he had lain a month in the Slough of Despond, and had played, like him, the long melancholy bass of spiritual heaviness. With Feeble-mind, he had fallen into the hands of Slay-good, of the nature of Man-eaters; and had limped along his difficult way upon the crutches of Ready-to-halt. Who better than himself could describe the condition of Despondency, and his daughter Much-afraid, in the dungeon of Doubting Castle? Had he not also fallen among thieves, like Little-faith?

His account of his entering upon the solemn duties of a preacher of the Gospel is at once curious and instructive. He deals honestly with himself, exposing all his various moods, doubts, and temptations. "I preached," he says, "what I felt; for the terrors of the law and the guilt of transgression lay heavy on my conscience. I had been as one sent to them from the dead. I went, myself in chains, to preach to them in chains; and carried that fire in my conscience which I persuaded them to beware of."

At times, when he stood up to preach, blasphemies and evil doubts rushed into his mind, and he felt a strong desire to utter them aloud to his congregation; and at other seasons, when he was about to apply to the sinner some searching and fearful text of Scripture, he was tempted to withhold it, on the ground that it condemned himself also; but, withstanding the suggestion of the Tempter, to use his own simile, he bowed himself like Sampson to condemn sin wherever he found it, though he brought guilt and condemnation upon himself thereby, choosing rather to die with the Philistines than to deny the truth.

Foreseeing the consequences of exposing himself to the operation of the penal laws by holding conventicles and preaching, he was deeply afflicted at the thought of the suffering and destitution to which his wife and children might be exposed by his death or imprisonment. Nothing can be more touching than his simple and earnest words on this point. They show how warm and deep were his human affections, and what a tender and loving heart he laid as a sacrifice on the altar of duty: —

"I found myself a man compassed with infirmities; the parting with my wife and poor children, hath often been to me in this place as the pulling the flesh from the bones; and also it brought to my mind the many hardships, miseries, and wants that my poor family was like to meet with should I be taken from them, especially my poor blind child, who lay nearer my heart than all beside. Oh, the thoughts of the hardships I thought my poor blind one might go under, would break my heart to pieces!

"Poor child, thought I, what sorrow art thou like to have for thy portion in this world! thou must be beaten, must beg, suffer hunger, cold, nakedness, and a thousand calamities, though I cannot now endure the wind should blow upon thee. But yet, thought I, I must venture you all with God, though it goeth to the quick to leave you: oh, I saw I was as a man who was pulling down his house upon the heads of his wife and children; yet I thought on those 'two milch kine that were to carry the ark of God into another country, and to leave their calves behind them.'

"But that which helpeth me in this temptation was divers considerations: The first was, the consideration of those two Scriptures, — 'Leave thy fatherless children, I will preserve thy children alive; and let thy widows trust in me,' and again, 'The Lord said, Verily it shall go well with thy remnant; verily I will cause the enemy to entreat them well in the time of evil.'"

He was arrested in 1660, charged with "Devilishly and perniciously abstaining from church," and of being "a common upholder of conventicles." At the quarter sessions, where his trial seems to have been conducted

somewhat like that of Faithful at Vanity Fair, he was sentenced to perpetual banishment. This sentence, however, was never executed, but he was remanded to Bedford jail, where he lay a prisoner for twelve years.

Here, shut out from the world, with no other books than the Bible and Fox's "Martyrs," he penned that great work which has attained a wider and more stable popularity than any other book in the English tongue. It is alike the favorite of the nursery and the study. Many experienced Christians hold it only second to the Bible; the infidel himself would not willingly let it die. Men of all sects read it with delight as in the main a truthful representation of the Christian pilgrimage, without indeed assenting to all the doctrines which the author puts in the mouth of his sermonizer, Greatheart, or which may be deduced from some other portions of his allegory. A recollection of his fearful sufferings, from a misapprehension of a single text in the Scriptures, relative to the question of election, we may suppose gave a milder tone to the theology of his Pilgrim than was altogether consistent with the Calvinism of the seventeenth century. "Religion," says Macaulay, "has scarcely ever worn a form so calm and soothing as in Bunyan's allegory." In composing it, he seems never to have altogether lost sight of the fact, that in his life and death struggle with Satan for the blessed promise recorded by the

CHRISTIAN.

Apostle of Love, the adversary was generally found on the Genevan side of the argument.

Little did the short-sighted persecutors of Bunyan dream, when they closed upon him the door of Bedford jail, that God would overrule their poor spite and envy, to his own glory and the world-wide renown of their victim. In the solitude of his prison, the ideal forms of beauty and sublimity, which had long flitted before him vaguely, like the vision of the Temanite, took shape and coloring; and he was endowed with power to reduce them to order, and arrange them in harmonious groupings. His powerful imagination, no longer self-tormenting, but under the direction of reason and grace, expanded his narrow cell into a vast theatre, lighted up for the display of his wonders. To this creative faculty of his mind might have been aptly applied the language which George Wither, a contemporary prisoner, addressed to his Muse: —

> "The dull loneness, the black shade
> Which these hanging vaults have made,
> The rude portals that give light
> More to terror than delight;
> This my chamber of neglect,
> Walled about with disrespect, —
> From all these, and this dull air,
> A fit object for despair,
> She hath taught me by her might,
> To draw comfort and delight."

That stony cell of his was to him like the rock of Padanaram to the wandering Patriarch. He saw angels ascending and descending. The House Beautiful rose up before him, and its holy sisterhood welcomed him.

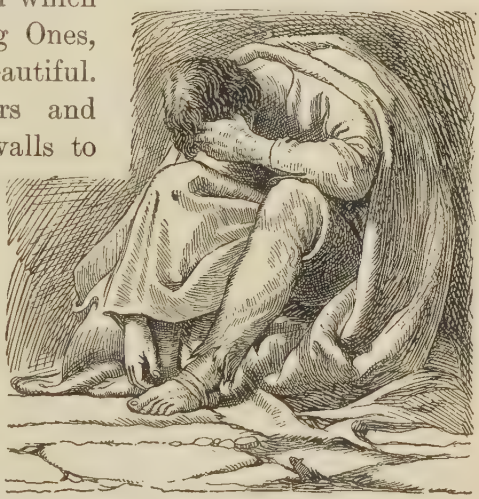
He looked, with his Pilgrim, from the Chamber of Peace. The Valley of Humiliation lay stretched out beneath his eye, and he heard "the curious melodious note of the country birds, who sing all the day long in the spring time, when the flowers appear, and the sun shines warm, and make the woods and groves and solitary places glad." Side by side with the good

Illustration from "The Pilgrim's Progress."

Christiana and the loving Mercy, he walked through the green and lowly valley, "fruitful as any the crow flies over," through "meadows beautiful with lilies"; the song of the poor but fresh-faced shepherd boy, who lived a merry life, and wore the herb *heart's-ease* in his bosom, sounded through his cell:

> "He that is down need fear no fall;
> He that is low no pride."

The broad and pleasant "river of the Water of Life" glided peacefully before him, fringed "on either side with green trees, with all manner of fruit," and leaves of healing, with "meadows beautified with lilies, and green all the year long;" he saw the Delectable Mountains, glorious with sunshine, overhung with gardens and orchards and vineyards; and beyond all, the Land of Beulah, with its eternal sunshine, its song of birds, its music of fountains, its purple clustered vines, and groves through which walked the Shining Ones, silver-winged and beautiful.



Bunyan in Prison.

What were bars and bolts and prison walls to him, whose eyes were anointed to see, and whose ears opened to hear, the glory and the rejoicing of the City of God, when the pilgrims were conducted to its golden gates, from the black and bitter river, with the sounding trumpeters, the transfigured harpers with their crowns of gold, the sweet voices of angels, the welcoming peal of bells in the holy city, and the songs of the redeemed ones? In reading the concluding pages of the first part of "Pilgrim's Progress," we feel as if the mysterious glory of the Beatific Vision was unveiled before us. We are dazzled with the excess of light. We are

entranced with the mighty melody; overwhelmed by the great anthem of rejoicing spirits. It can only be adequately described in the language of Milton in respect to the Apocalypse, as "a seven-fold chorus of hallelujahs and harping symphonies."

Few who read Bunyan nowadays think of him as one of the brave old English confessors, whose steady and firm endurance of persecution baffled, and in the end overcame, the tyranny of the established church in the reign of Charles II. What Milton and Penn and Locke wrote in defence of liberty, Bunyan lived out and acted. He made no concessions to worldly rank. Dissolute lords and proud bishops he counted less than the humblest and poorest of his disciples at Bedford. When first arrested and thrown into prison, he supposed he should be called to suffer death for his faithful testimony to the truth; and his great fear was, that he should not meet his fate with the requisite firmness, and so dishonor the cause of his Master. And when dark clouds came over him, and he sought in vain for a sufficient evidence that in the event of his death it would be well with him, he girded up his soul with the reflection, that, as he suffered for the word and way of God, he was engaged not to shrink one hair's breadth from it. "I will leap," he says, "off the ladder blindfold into eternity, sink or swim, come heaven, come hell. Lord Jesus, if thou wilt catch me, do; if not, I will venture in thy name!"

The English revolution of the seventeenth century, while it humbled the false and oppressive aristocracy of rank and title, was prodigal in the development of the real nobility of the mind and heart. Its history is

bright with the footprints of men whose very names still stir the hearts of freemen, the world over, like a trumpet peal. Say what we may of its fanaticism, laugh as we may at its extravagant enjoyment of newly acquired religious and civil liberty, who shall now venture to deny that it was the golden age of England? Who that regards freedom above slavery, will now sympathize with the outcry and lamentations of those interested in the continuance of the old order of things, against the prevalence of sects and schism, but who, at the same time, as Milton shrewdly intimates, dreaded more the rending of their pontifical sleeves than the rending of the church? Who shall now sneer at Puritanism, with the "Defence of Unlicensed Printing" before him? Who scoff at Quakerism over the Journal of George Fox? Who shall join with debauched lordlings and fat-witted prelates in ridicule of Anabaptist levellers and dippers, after rising from the perusal of Pilgrim's Progress? "There were giants in those days." And foremost amidst that band of liberty-loving and God-fearing men,

> "The slandered Calvinists of Charles' time,
> Who fought and won it, Freedom's holy fight,"

stands the subject of our sketch, the Tinker of Elstow.

ROBERT BURNS

Robert Burns, the most famous poet of Scotland, the son of a poor but worthy farmer, was born at Alloway near Ayr, Jan. 25, 1759. He had a rather careful education, and began early to write verse. He began farming for himself in 1784, but had only ill fortune. The first edition of his poems was published in 1786 and established his fame. In 1789 he married, and the following year was appointed on the excise. He died July 21, 1796.

ROBERT BURNS

By THOMAS CARLYLE.

Robert Burns.

BURNS first came upon the world as a prodigy; and was, in that character, entertained by it, in the usual fashion, with loud, vague, tumultuous wonder, speedily subsiding into censure and neglect; till his early and most mournful death again awakened an enthusiasm for him. . . .

Let it not be objected that he did little: he did much, if we consider where and how. If the work performed was small, we must remember that he had his very materials to discover; for the metal he worked in lay hid under the desert, where no eye but his guessed its existence; and we may almost say, that with his own hand he had to construct the tools for fashioning it. For he found himself in the deepest obscurity, without help, without instruction, without model; or with models only of the meanest sort. An educated man stands, as it were, in the midst

of a boundless arsenal and magazine, filled with all the weapons and engines which man's skill has been able to devise from the earliest time; and he works, accordingly, with a strength borrowed from all past ages. How different is his state who stands on the outside of that storehouse, and feels that its gates must be stormed, or remain forever shut against him! His means are the commonest and rudest; the mere work done is no measure of his strength. A dwarf behind his steam-engine may remove mountains; but no dwarf will hew them down with the pick-axe; and he must be a Titan that hurls them abroad with his arms.

Birthplace of Burns.

It is in this last shape that Burns presents himself. Born in an age the most prosaic Britain has yet seen, and in a condition the most disadvantageous, where his mind, if it accomplished aught, must accomplish it under the pressure of continual bodily toil, nay, of penury and desponding apprehension of the worst evils, and with no furtherance but such knowledge as dwells in a poor man's hut, and the rhymes of a Ferguson or Ramsay for his standard of beauty, he sinks not under all these impediments. Through the fogs and darkness of that obscure region, his eagle eye discerns the true relations of the world and human life; he grows into intellectual strength and

trains himself into intellectual expertness. Impelled by the irrepressible movement of his inward spirit, he struggles forward into the general view, and with haughty modesty lays down before us, as the fruit of his labor, a gift, which Time has now pronounced imperishable. Add to all this, that his darksome, drudging childhood and youth was by far the kindliest era of his whole life; and that he died in his thirty-seventh year; and then ask if it be strange that his poems are imperfect, and of small extent, or that his genius attained no mastery in its art? Alas, his Sun shone as through a tropical tornado; and the pale Shadow of Death eclipsed it at noon! Shrouded in such baleful vapors, the genius of Burns was never seen in clear azure splendor, enlightening the world. But some beams from it did, by fits, pierce through; and it tinted those clouds with rainbow and orient colors into a glory and stern grandeur, which men silently gazed on with wonder and tears! . . .

We love Burns, and we pity him; and love and pity are prone to magnify. Criticism, it is sometimes thought, should be a cold business; we are not so sure of this; but, at all events, our concern with Burns is not exclusively that of critics. True and genial as his poetry must appear, it is not chiefly as a poet, but as a man, that he interests and affects us.

He was often advised to write a tragedy: time and means were not lent him for this; but through life he enacted a tragedy, and one of the deepest. We question whether the world has since witnessed so utterly sad a scene; whether Napoleon himself, left to brawl with Sir Hudson Lowe and perish on his rock, "amid

the melancholy main," presented to the reflecting mind such a "spectacle of pity and fear," as did this intrinsically nobler, gentler, and perhaps greater soul, wasting itself away in a hopeless struggle with base entanglements, which coiled closer and closer round him, till only death opened him an outlet. Conquerors are a race with whom the world could well dispense; nor can the hard intellect, the unsympathizing loftiness, and high but selfish enthusiasm of such persons, inspire us in general with any affection; at best it may excite amazement; and their fall, like that of a pyramid, will be beheld with a certain sadness and awe. But a true poet, a man in whose heart resides some effluence of wisdom, some tone of the "eternal melodies," is the most precious gift that can be bestowed on a generation; we see in him a freer, purer development of whatever is noblest in ourselves: his life is a rich lesson to us, and we mourn his death as that of a benefactor who loved and taught us. . . .

Properly speaking, there is but one era in the life of Burns, and that the earliest. We have not youth and manhood; but only youth: for, to the end, we discern no decisive change in the complexion of his character; in his thirty-seventh year, he is still, as it were, in youth. With all that resoluteness of judgment, that penetrating insight, and singular maturity of intellectual power, exhibited in his writings, he never attains to any clearness regarding himself; to the last he never ascertains his peculiar aim, even with such distinctness as is common with ordinary men; and therefore never can pursue it with that singleness of will, which insures success and some contentment to such men. To the

last, he wavers between two purposes: glorying in his talent, like a true poet, he yet cannot consent to make that his chief and sole glory, and to follow it as the one thing needful, through poverty or riches, through good or evil report.

Another far meaner ambition still cleaves to him; he must dream and struggle about a certain "rock of independence," which, natural and even admirable as it might be, was still but a warring with the world, on the comparatively insignificant ground of his being more or less completely supplied with money than others; of his standing at a higher or at a lower altitude in general estimation than others. For the world still appears to him, as to the young, in borrowed colors: he expects from it what it cannot give to any man; seeks for contentment, not within himself, in action and wise effort, but from without, in the kindness of circumstances, in love, friendship, honor, pecuniary ease. He would be happy, not actively and in himself, but passively, and from some ideal cornucopia of enjoyments, not earned by his own labor, but showered on him by the beneficence of destiny. Thus, like a young man, he cannot steady himself for any fixed or systematic pursuit, but swerves to and fro, between passionate hope and remorseful disappointment. Rushing onwards with a deep, tempestuous force, he surmounts or breaks asunder many a barrier; travels, nay, advances far, but advancing only under uncertain guidance, is ever and anon turned from his path, and to the last cannot reach the only true happiness of a man, that of clear, decided activity in the sphere for which by nature and circumstances he has been fitted and appointed. . . .

By much the most striking incident in Burns's life is his journey to Edinburgh; but perhaps a still more important one is his residence in Irvine, so early as in his twenty-third year. Hitherto, his life had been poor and toilworn; but otherwise not uncongenial, and, with all its distresses, by no means unhappy. In his parentage, deducting outward circumstances, he had every reason to reckon himself fortunate: his father was a man of thoughtful, intense, earnest character, as the best of our peasants are; valuing knowledge, possessing some, and, what is far better and rarer, open-minded for more; a man with keen insight and devout heart; reverent towards God, friendly thereafter at once, and fearless towards all that God has made; in one word, though but a hard-handed peasant, a complete and fully unfolded Man. Such a father is seldom found in any rank in society; and was worth descending far in society to seek.

Unfortunately, he was very poor; had he been even a little richer, almost ever so little, the whole might have issued far otherwise. Mighty events turn on a straw; the crossing of a brook decides the conquest of the world. Had this William Burns's small seven acres of nursery ground anywise prospered, the boy Robert had been sent to school; had struggled forward, as so many weaker men do, to some university; come forth not as a rustic wonder, but as a regular well-trained intellectual workman, and changed the whole course of British Literature, — for it lay in him to have done this!

But the nursery did not prosper; poverty sank his whole family below the help of even our cheap school

system. Burns remained a hard-worked plough-boy, and British literature took its own course. Nevertheless, even in this rugged scene, there is much to nourish him. If he drudges, it is with his brother, and for his father and mother, whom he loves, and would fain shield from want. Wisdom is not banishment from their poor hearth, nor the balm of natural feeling: the solemn words, Let us worship God, are heard there from a "priest-like father." If threatenings of unjust men throw women and children into tears, these are tears not of grief only, but of holiest affection; every heart in that humble group feels itself the closer knit to every other. In their hard warfare they are there together, a "little band of brethren." Neither are such tears, and the deep beauty that dwells in them, their only portion. Light visits the hearts as it does the eyes of all living: there is a force, too, in this youth, that enables him to trample on misfortune; nay, to bind it under his feet to make him sport. For a bold, warm, buoyant humor of character has been given him; and so the thick-coming shapes of evil are welcomed with a gay, friendly irony, and in their closest pressure he bates no jot of heart or hope. Vague yearnings of ambition fail not, as he grows up; dreamy fancies hang like

Burns as a Plough-boy.

cloud-cities around him; the curtain of existence is slowly rising, in many-colored splendor and gloom; and the auroral light of first love is gilding his horizon, and the music of song is on his path; and so he walks

> —in glory and in joy,
> Behind his plough upon the mountain side!

We know, from the best evidence, that up to this date, Burns was happy; nay that he was the gayest, brightest, most fantastic, fascinating being to be found in the world; more so even than he often appeared.

But now, at this early age, he quits the paternal roof; goes forth into looser, louder, more exciting society; and becomes initiated in those dissipations, those vices, which a certain class of philosophers have asserted to be a natural preparative for entering on active life; a kind of mud-bath, in which the youth is, as it were, necessitated to steep, and, we suppose, cleanse himself, before the real toga of manhood can be laid on him. We shall not dispute much with this class of philosophers; we hope they are mistaken: for sin and remorse so easily beset us at all stages of life, and are always such indifferent company, that it seems hard we should at any stage be forced and fated, not only to meet, but to yield to them; and even serve for a term in their leprous armada. We hope it is not so. Clear we are, at all events, it cannot be the training one receives in this service, but only our determining to desert from it, that fits us for true manly action. We become men, not after we have been dissipated and disappointed in the chase of false pleasure; but after we have ascertained, in any way, what impassable barriers hem us in through

this life; how mad it is to hope for contentment to our infinite soul from the gifts of this extremely finite world! That a man must be sufficient for himself; and that "for suffering and enduring there is no remedy but striving and doing."

Manhood begins when we have in any way made truce with necessity; begins, at all events, when we have surrendered to necessity, as the most part only do; but begins joyfully and hopefully only when we have reconciled ourselves to necessity; and thus, in reality triumphed over it, and felt that in necessity we are free.

Surely, such lessons as this last, which in one shape or other is the grand lesson for every mortal man, are better learned from the lips of a devout mother, in the looks and actions of a devout father, while the heart is yet soft and pliant, than in collision with the sharp adamant of fate, attracting us to shipwreck us, when the heart is grown hard, and may be broken before it will become contrite! Had Burns continued to learn this, as he was already learning it, in his father's cottage, he would have learned it fully, which he never did,—and been saved many a lasting aberration, many a bitter hour and year of remorseful sorrow. . . .

He loses his feeling of innocence; his mind is at variance with itself; the old divinity no longer presides there; but wild desires and wild repentance alternately oppress him. Ere long, too, he has committed himself before the world; his character for sobriety, dear to a Scottish peasant, as few corrupted worldlings can even conceive, is destroyed in the eyes of men; and his only refuge consists in trying to disbelieve his guiltiness, and

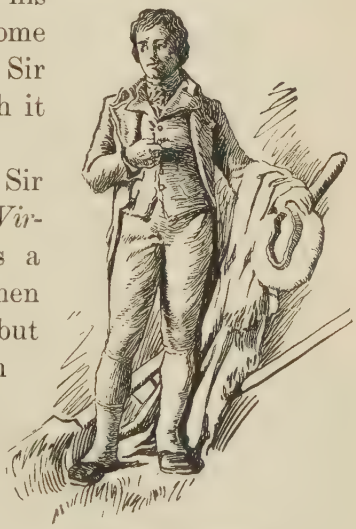
is but a refuge of lies. The blackest desperation now gathers over him, broken only by the red lightnings of remorse. The whole fabric of his life is blasted asunder; for not only his character but his personal liberty is to be lost; men and fortune are leagued for his hurt; "hungry ruin has him in the wind." He sees no escape but the saddest of all: exile from his loved country to a country in every sense inhospitable and abhorrent to him. While the "gloomy night is gathering fast," in mental storm and solitude, as well as in physical, he sings his wild "farewell to Scotland."

> "Farewell, my friends, farewell, my foes,
> My peace with these, my love with those:
> The bursting tears my heart declare;
> Adieu, my native banks of Ayr!"

Light breaks suddenly in upon him in floods; but still a false transitory light, and no real sunshine. He is invited to Edinburgh, hastens thither with anticipating heart; is welcomed as in triumph, and with universal blandishment and acclamation; whatever is wisest, whatever is greatest or loveliest there, gathers round him, to gaze on his face, to show him honor, sympathy, affection. Burns's appearance among the sages and nobles of Edinburgh must be regarded as one of the most singular phenomena in modern literature, almost like the appearance of some Napoleon among the crowned sovereigns of modern politics. For it is nowise as a "mockery king," set there by favor, transiently and for a purpose, that he will let himself be treated; still less is he a mad Rienzi, whose sudden elevation turns his too weak head: but he stands there

on his own basis; cool, unastonished, holding his equal rank from Nature herself; putting forth no claim where there is not strength in him, as well as about him, to vindicate.

The farther we remove from this scene, the more singular will it seem to us; details of the exterior aspect of it are already full of interest. Most readers recollect Mr. Walker's personal interviews with Burns as among the best passages of his narrative; a time will come when this reminiscence of Sir Walter Scott's, slight though it is, will also be precious.



Statue of Burns.

"As for Burns," writes Sir Walter, "I may truly say *Virgilium vidi tantum*. I was a lad of fifteen in 1786–7, when he first came to Edinburgh, but had sense and feeling enough to be much interested in his poetry, and would have given the world to know him; but I had very little acquaintance with any literary people; and still less with the gentry of the west country, the two sets that he most frequented. Mr. Thomas Grierson was at that time a clerk of my father's. He knew Burns, and promised to ask him to his lodgings to dinner, but had no opportunity to keep his word; otherwise I might have seen more of this distinguished man. As it was, I saw him one day at the late venerable Professor Ferguson's, where there

were several gentlemen of literary reputation, among whom I remember the celebrated Mr. Dugald Stewart. Of course, we youngsters sat silent, looked and listened. The only thing I remember which was remarkable in Burns's manner was the effect produced upon him by a print of Bunbury's, representing a soldier lying dead on the snow, his dog sitting in misery on one side, — on the other, his widow, with a child in her arms. These lines were written beneath:

> "'Cold on Canadian hills, or Minden's plain,
> Perhaps that mother wept her soldier slain;
> Bent o'er her babe, her eye dissolved in dew,
> The big drops mingling with the milk he drew,
> Gave the sad presage of his future years,
> The child of misery baptized in tears.'

"Burns seemed much affected by the print, or rather by the ideas which it suggested to his mind. He actually shed tears. He asked whose the lines were, and it chanced that nobody but myself remembered that they occur in a half-forgotten poem of Langhorne's, called by the unpromising title of 'The Justice of Peace.' I whispered my information to a friend present, he mentioned it to Burns, who rewarded me with a look and a

"Bonnie Doon."

word, which, though of mere civility, I then received and still recollect with very great pleasure.

"His person was strong and robust; his manners rustic, not clownish; a sort of dignified plainness and simplicity, which received part of its effect perhaps from one's knowledge of his extraordinary talents.

"His features are represented in Mr. Nasmyth's picture; but to me it conveys the idea that they are diminished, as if seen in perspective. I think his countenance was more massive than it looks in any of the portraits. I should have taken the poet, had I not known what he was, for a very sagacious country farmer of the old Scotch school, i.e. none of your modern agriculturists who keep laborers for their drudgery, but the *douce gudeman* who held his own plough. There was a strong expression of sense and shrewdness in all his lineaments; the eye alone I think indicated the poetical character and temperament. It was large, and of a dark cast, which glowed (I say literally glowed) when he spoke with feeling or interest. I never saw such another eye in a human head, though I have seen the most distinguished men of my time. His conversation expressed perfect self-confidence, without the slightest presumption. Among the men who were the most learned of their time and country, he expressed himself with perfect firmness, but without the least intrusive forwardness; and when he differed in opinion, he did not hesitate to express it firmly, yet at the same time with modesty. I do not remember any part of his conversation distinctly enough to be quoted; nor did I ever see him again, except in the street, where he did not recognize me, as I could not

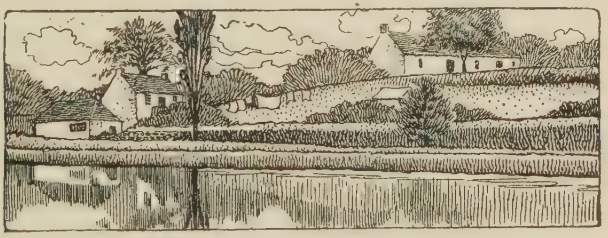
expect he should. He was much caressed in Edinburgh; but (considering what literary emoluments have been since his day) the efforts made for his relief were extremely trifling.

"I remember on this occasion I mention, I thought Burns's acquaintance with English poetry was rather limited; and also that, having twenty times the abilities of Allan Ramsay and of Ferguson, he talked of them with too much humility as his models: there was doubtless national predilection in his estimate.

"This is all I can tell you about Burns. I have only to add that his dress corresponded with his manner. He was like a farmer dressed in his best to dine with the laird. I do not speak *in malam partem*, when I say, I never saw a man in company with his superiors in station or information more perfectly free from either the reality or the affectation of embarrassment. I was told, but did not observe it, that his address to females was extremely deferential, and always with a turn either to the pathetic or humorous, which engaged their attention particularly. I have heard the late Duchess of Gordon remark this. — I do not know anything I can add to these recollections of forty years since."

The conduct of Burns under this dazzling blaze of favor, the calm, unaffected, manly manner, in which he not only bore it, but estimated its value, has justly been regarded as the best proof that could be given of his real vigor and integrity of mind. A little natural vanity, some touches of hypocritical modesty, some glimmerings of affectation, at least some fear of being thought affected, we could have pardoned in

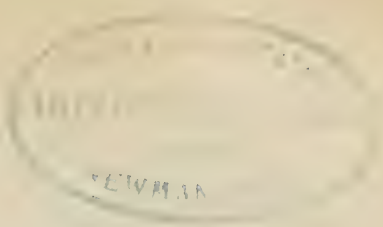
almost any man; but no such indication is to be traced here. In his unexampled situation the young peasant is not a moment perplexed; so many strange lights do not confuse him, do not lead him astray. Nevertheless, we cannot perceive that this winter did not do him great and lasting injury. A somewhat clearer knowledge of men's affairs, scarcely of their characters, it did afford him: but a sharper feeling of Fortune's unequal arrangements in their social destiny it also left with him. He had seen the gay and gorgeous arena, in which the powerful are born to play their parts; nay had himself stood in the midst of it; and he felt more



Typical Scotch Landscape.

bitterly than ever, that there he was but a looker-on, and had no part or lot in that splendid game. From this time a jealous indignant fear of social degradation takes possession of him; and perverts, so far as aught could pervert, his private contentment, and his feelings towards his richer fellows. It was clear to Burns that he had talent enough to make a fortune, or a hundred fortunes, could he but have rightly willed this; it was clear also that he willed something far different, and therefore could not make one. Unhappy it was that he had not power to choose the one, and

reject the other; but must halt forever between two opinions, two objects; making hampered advancement towards either. But so is it with many men: we "long for the merchandise, yet would fain keep the price"; and so stand chaffering with Fate in vexatious altercation, till the night come, and our fair is over!



JOHN BURROUGHS

John Burroughs, an eminent American nature-lover and essayist, was born in Roxbury, New York, April 3, 1837. His father was a farmer. After getting his education in the manner described in the following autobiographical fragment (reprinted from *St. Nicholas* through the consent of the Century Company), he became a journalist in New York, and pursued other occupations until 1874, when he returned to a farming life varied with culture of literature. Among his best-known books are "Wake Robin" (1871), "Winter Sunshine" (1875), "Birds and Poets" (1877), "Locusts and Wild Honey" (1879), "Pepacton," (1881), "Sharp Eyes," 1888.

A GLANCE BACKWARD[1]

By JOHN BURROUGHS.

John Burroughs.

FOR thirty years or more I have been afflicted with a sort of chronic homesickness, a longing for the old home where I was born, yonder amid the hills. Every season I go back there, and for a brief season the homesickness is allayed; but it soon returns again, and then I discover that it is a longing for youth, for father and mother, and for the old days on the farm which cannot return.

The farm boy never outgrows his love of the farm; how its memories cling to him, how the old scenes are interwoven with the very texture of his being! One can go back to his natal spot, but how impossible to go back to the life he lived there, to resume again the days of his youth!

When I last visited the old home I went up on the Old Clump, a high bald-top mountain in the lap of

[1] With the permission of the author and of the *Century* Company.

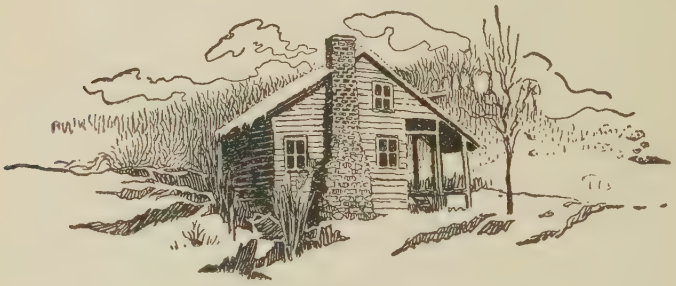
which my father's farm lay, and where as a youth I had been scores of times to salt the sheep or to fetch them home. I drank at the cold spring just below the summit where I had so often drunk before, and then I sat down upon a rock and mused upon the landscape spread out at my feet. How unchanged to my outward eye, how changed to my inward vision!

From nearly every one of the dozens of homesteads within my view, the old people whom I had known so well were gone, and a new generation had taken their places. There in the distance, its open door just visible as a black spot, stands the little red schoolhouse where I went to school, and there through the meadows below it meanders the little brook where we used to build ponds and swim and fish during the long summer noonings. In going to school we went a mile or more "cross-lots," and had to cross this stream. Once when it was swollen by a January thaw, in attempting to leap over it I slipped and fell my whole length in its icy current. I do not remember that it gave me a cold or that I suffered any inconvenience from it except that of wet clothes most of the day. I suspect that I sprang out of the water so quickly that little more than my feet and outer garments were much wetted.

We had a mile and a half to go to school, part of the way across a very windy hill, and during the severe blizzards of that high altitude, I used to suffer a good deal from the cold, frequently freezing my ears, and once one of my little fingers. But my feet suffered most, encased in stiff cow-hide boots, unprotected by rubbers or arctics. Often I would reach the schoolhouse with my boots frozen as stiffly as if they were

cast iron. And the chilblains I suffered from, and the intolerable itching of my heels as they began to thaw out on the approach of spring, are not pleasant to think about.

Till the age of about twelve I went to school winter and summer; but after that time my help was needed on the farm, and I went to school only winters. Then I mastered Dayboll's arithmetic, and remember yet the "sum" on the last pages of the book which was considered the toughest problem of all — the sum of the hare and the hound. What a wilderness the books

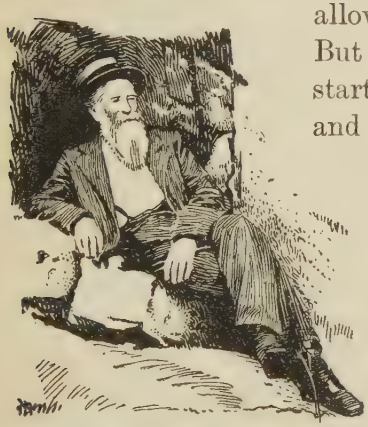


His Study.

seemed to the beginner; with what a curious interest we used to look forward into "Tare and Tret," "The Rule of Three," "The Double Rule of Three," etc., as to mysteries into which we should by and by be initiated.

When about fifteen I began the study of Algebra and Grammar, and I recall what trouble I had to get the books. My father was a fairly prosperous farmer, but did not hold very liberal ideas on the subject of education. He thought reading, writing, and arithmetic enough for his boys, and it proved enough for all but me; I wanted an algebra. This was a new fangled

notion that father did not approve of. He had never before heard of such a study, and refused to get the book. On Saturday when I was going to the village on some errand, I labored with him the best I knew how — that is to say I "coaxed" him all morning to allow me to buy an algebra. But he sternly refused, and I started off with a heavy heart and wet eyes for the village. Mother was always on the side of her children, and had vigorously seconded my request before I started.



Among the Rocks.

Before I had got a quarter of a mile from the house, and while yet in sight of it, she made it so hot for father that he yielded and shouted to me that I might get the book. But my blood was up and I resolved not to get it till I could get it with my own money; this I was soon able to do. Sugar weather was at hand; I tapped some trees and got some small cakes of very fine sugar in the market early. These brought me money to buy this and other books, among them my first grammar.

I had a kind father, but he had a way of saying "no" very loudly when his heart was saying "yes," and often the more emphatic his denial, the more we felt encouraged to go on coaxing. His firmness in refusing the requests of his children was not deep-rooted, and often made up in bluster what it really lacked in force. He was pretty sure to yield if we

kept up the siege long enough, especially if mother joined in.

I was the only member of the family that showed any aptitude for books, or, as the country phrase is, "took to larnin'"; my father's fear with regard to me was that I would finally come out a Methodist minister. This would have been a great shock to him, as he belonged to a sect very hostile to the Methodists — namely the old-school Baptist, which looked upon the free salvationists with contempt and disgust. One of my earliest remembrances is of witnessing the heated and often acrimonious debates between father and one of his Methodist neighbors, upon the difference in their creeds. Many long winter nights have I seen them wrangling till late bedtime, each bent upon convincing the other of error, but never succeeding. Both as old men died in the faiths which they early espoused, and each seemed to have found his own sufficient.

Of my literary tendencies, father had no conception. It was a great departure from the traditions of the family, and I suspect to the last he had no appreciation of the ends I had in view, or of the results I achieved. Upon the subject of my writings he was always silent. He never read a page of my inditing that I know, and his attitude toward this phase of my career was always one of curious reticence. But I was told that when in his old age some member of the family showed him my picture in some publication, he was moved to tears.

Sitting there upon the Old Clump and looking down upon the scene of his labors, the fields he cleared and improved, and where the vigor of his manhood was spent, I think of him with unspeakable tenderness; and

of mother too who did even more than her share in the battle which they fought together.

When I was sixteen I had a strong desire to go away, for a term or two, to a boarding school in an adjoining town, and finally, reinforced by mother, obtained father's reluctant consent. The first and about the only ploughing I ever did was in September in getting the farm work advanced so that I could be spared. I worked at it diligently many days; cross-ploughing I think it was, getting the ground ready for rye. But when the time came for me to go, father had changed his mind; he had been counting the cost, and concluded he could not afford it. Besides that, none of the rest of the children had had such privileges, and I was no better than they were. It was a bitter disappointment to me, but probably just as well for me that I did not go. It threw me back upon my own resources and made me determined to make the most of my home advantages.

I went that winter to the district school, studied hard, and in the spring felt qualified to teach such small fry as usually attend a summer school in the country. So I resolved to try teaching, and in April set out to look for a vacancy in an adjoining county. It was the first time I had ever seen a stage-coach or had ridden upon one. I walked ten miles to the turnpike and awaited the coming of the coach. I well remember that I was under considerable excitement during the hour I hung about the stage-house in the little village. I was about to begin a forty-mile journey in a public conveyance, and just how to deport myself, and what would be expected of me as a passenger in

an imposing four-horse stage-coach, were important questions. How sensitive is youth! Into what a flutter a trifling circumstance throws it! But I got along very well. The great chariot that rolled and thundered so proudly through these sequestered valleys did not quite overwhelm me, but put me down safely in the afternoon at my destination.

After looking about for a few days I found what I was in quest of — a district in want of a teacher and willing to give me a trial. I returned home, and then went back and began the school in two or three weeks. I engaged to teach for ten dollars a month for the first month, and eleven dollars thereafter for six months if I suited, and "board around." The trial month was satisfactory, and I stuck to it for the six months. I had never before been from home but a few days at a time, and how homesick I became during some of those long spring and summer days, only few of my young readers can perhaps understand.

Watching the Birds.

But the end came at last, and I went back home in the Fall with more than fifty dollars in my pocket, all of my own earning. That winter I went to the seminary and paid my own way, and learned and experienced many things, and was much better qualified to

teach the same school again, which I was engaged to do the following Fall, at just double my former wages.

Recently in driving through the country (after an absence of more than thirty years), I went out of my way to look again upon the scenes of my early experience in teaching a district school. How strange and melancholy the country looked to me — so much rougher and poorer than I had thought it to be! And the houses, too, — many of which were yet standing as I had left them, — how small and poor they looked! Probably if they had possessed eyes, I should have looked small and poor to them also. We had all been young together, and we knew that nothing magnifies and exalts like youth.

I knew that all the old people whom I had known were gone, and many of the younger ones, too. I saw no face that I knew. Yes, there comes one of my barefoot schoolboys, Alonzo Davis, the very lad I once knew so well. It quite startled me; the same open, bright blue eyes, the short nose, the round face, and the brisk, nonchalant air — an exact copy of his father at that age. He passed by without regarding me, but how my eye dwelt upon him, and how much he brought up before me of which he had no knowledge! My Alonzo was a gray-haired man; I probably saw him in a field cutting corn, but in his boy I again saw him exactly as he was a third of a century before.

The little red schoolhouse, quite unchanged as far as I could see, with what a sad, curious interest I looked upon it!

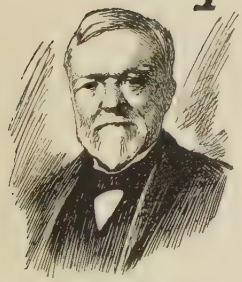
The youth who had labored there and of whom I was thinking, seemed like some son, or younger brother,

who had long since passed away. What a lonely time I had of it; how constantly my thoughts had flown back to the home and the farm cradled in the hills, where my father and mother were in the prime of their days. Here I passed a road that led down under a hill where a poor family had lived, and where my "boarding around" had occasionally taken me. One night as I turned over in bed, the bedstead began to reel and sway like a ship at sea, then presently gave a lurch to one side and came down upon the floor with a crash. But I found myself still inside the bed, and even managed to pass the rest of the night in tolerable comfort.

I was not much of a student of the birds or of nature during those years. As a farm boy I had known all the common birds well, and had loved the woods and the fields passionately; but my attention was not seriously turned to natural history till I was a man grown. But no one starts in the study of natural history with such advantages as he whose youth was passed on the farm. He has already got a great deal of it in his blood and bones; he has grown up in right relations with bird and beast; the study comes easy and natural to him. The main things are a love of nature and simple tastes; and who so likely to have these as the boy from the farm?

ANDREW CARNEGIE[1]

By JOHN DENISON CHAMPLIN.



Andrew Carnegie.

ANDREW CARNEGIE was born on November 25, 1837, in the ancient burgh of Dunfermline, Fifeshire, Scotland. . . . His father, William Carnegie, a master linen weaver before the days of steam, was a man of rugged character, a radical in politics, and a born reformer. . . .

Mr. Carnegie relates with pride that among his earliest recollections is that when a mere child he once wandered into a public hall in Dunfermline and was surprised to find his father there, making a political speech.

To his mother he owes an even greater debt of gratitude. She was a remarkable woman of fine temperament, and of great force of character, united with a strength of will and of determination fitted to overcome obstacles. She was her children's only teacher until Andrew was eight years old, when he was placed

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at school under a Mr. Martin, a noted teacher in Dunfermline, under whose care the boy soon became an apt scholar.

The introduction of steam machinery and of the factory system brought about a change in the fortunes of the Carnegie family. William Carnegie, who, with his four looms and his apprentices, had made a respectable living by supplying the merchants with hand-woven linen, found his occupation gone and was obliged to look elsewhere for means of support. His thoughts were turned towards the United States by the reports of relatives already settled in Pittsburg, and in 1848 he and his wife resolved to emigrate thither. It was a great sacrifice for them; but with a spirit of self-abnegation characteristic of their lives they said, "It will be better for the boys."

CARNEGIE'S BIRTHPLACE AT DUNFERMLINE, SCOTLAND.

The family, consisting of the father, mother, Andrew, and a younger brother, Thomas (always associated with Andrew, but who died early), crossed the ocean in a sailing vessel and went to Allegheny City, then a town of about ten thousand inhabitants, opposite Pittsburg. There Andrew found his first employment, when twelve years old, as a bobbin-boy in a cotton factory at one dollar and twenty cents a week. Before he was thirteen he had learned to run a steam engine and was

employed as engineman in a factory for making bobbins. His next step in advancement was to the clerkship of his employer, who had found out that the boy could write a good hand and knew something about arithmetic. But this was in addition to much hard labor elsewhere in the factory, and by no means satisfied his youthful ambition, which had, even then, begun to look into the future.

One day, when fourteen years old, he applied for a position in the office of the Ohio Telegraph Company, and was employed as a messenger boy at two dollars and a half a week. Of this episode in his career Mr. Carnegie himself writes: —

"My entrance into the telegraph office was a transition from darkness to light — from firing a small engine in a dark and dirty cellar into a clean office with bright windows and a literary atmosphere, with books, newspapers, pens, and pencils all around me. I was the happiest boy alive."

Mr. James D. Reid, the superintendent of the office, and himself a Scotchman, favored the ambitious lad and helped him. In his "History of the Telegraph" he says of him: —

"I liked the boy's looks, and it was easy to see that, though he was little, he was full of spirit. He had not been with me a month when he began to ask whether I would teach him to telegraph. I began to instruct him and found him an apt pupil. He spent all his spare time in practice, sending and receiving by sound and not by tape, as was largely the custom in those days. Pretty soon he could do as well as I could at the key, and then his ambition carried

him away beyond doing the drudgery of messenger work."

The death of his father at this time threw the burden of the support of the family on the boy's shoulders, for his brother was yet too young to aid him; but he did not flinch from the ordeal. He became an operator in the telegraph office at twenty-five dollars a month, — a sum which seemed to him then a fortune, for on it the family could be independent. He earned a little additional money by copying telegraphic messages for the newspapers, and was now on the road to success.

The *Electric Age* said of this period of his career: "He was a telegraph operator abreast of older and experienced men; and, although receiving message by sound was, at that time, forbidden by authority as being unsafe, young Carnegie quickly acquired the art, and he can still stand behind the ticker and understand its tongue. As an operator he delighted in full employment and the prompt discharge of business, and a big day's work was his chief pleasure.

"And so it happened that when the Pennsylvania Railroad Company needed an operator 'Andie' was at once chosen to fill the place. Here he first developed those peculiar qualities of mental acumen and intuition which have since made him the manager of men and the director of broad and useful enterprises. He soon mastered the details of despatching, and showed how the telegraph could be made to minister to railroad safety and success."

His marked ability soon led to his appointment as secretary to Colonel Thomas A. Scott, then superintendent, and to his removal to the headquarters of the

company, and not long afterward, when Colonel Scott became vice-president, to his advancement to the responsible duties of superintendent of the Western division of the Pennsylvania railroad.

One day, when Mr. Carnegie was on a train examining the line from the rear window of a car, a tall spare man accosted him and asked him to look at an invention he had made. He drew from a green bag a small model of a sleeping berth for railway cars, and proceeded to point out its advantages. It was Mr. T. T. Woodruff, the inventor of the sleeping car. Mr. Carnegie tells the story himself in "Triumphant Democracy": —

It was Mr. T. T. Woodruff.

"He had not spoken a minute before, like a flash, the whole range of the discovery burst upon me. 'Yes,' I said, 'that is something which this continent must have.'

"Upon my return I laid it before Mr. Scott, declaring that it was one of the inventions of the age. He remarked: 'You are enthusiastic, young man, but you may ask the inventor to come and let me see it.' I did so, and arrangements were made to build two trial cars, and run them on the Pennsylvania railroad. I was offered an interest in the venture, which, of course, I gladly accepted. . . .

"The notice came that my share of the first payment was two hundred and seventeen dollars and a half. How well I remember the exact sum! But two hundred and seventeen dollars and a half were as far beyond my means as if it had been millions. I was earning fifty dollars a month, however, and had prospects, or at least I always felt that I had. I decided to call on the local banker and boldly ask him to advance the sum upon my interest in the affair. He put his hand on my shoulder and said: 'Why, of course, Andie, you are all right. Go ahead! Here is the money.'

"It is a proud day for a man when he pays his last note, but not to be named in comparison with the day in which he makes his first one, and gets a banker to take it. I have tried both and I know. The cars paid the subsequent payments from their earnings. I paid my first note from my savings, so much per month, and thus did I get my foot upon fortune's ladder. It is easy to climb after that. And thus came sleeping cars into the world," which, under the able management of Mr. George M. Pullman, have since achieved so great a success.

When the American Civil War broke out in 1861 Mr. Carnegie was called to Washington by Colonel Scott, who was then Assistant Secretary of War, and intrusted with the charge of the military railroads and telegraphs of the Government. As railway communication with the capital had been broken, Mr. Carnegie had to go by water from Philadelphia to Annapolis, where he began, with a large force, to repair the line in order to open communication with the seat of government.

General Butler, with the Massachusetts troops, had arrived meanwhile at Annapolis and was encamped there, awaiting the opening of the line. Carnegie rode into Washington on the first locomotive that went over the road. Between Elbridge Junction and Washington the Confederates had pinned the telegraph wires to the ground so as to interrupt communication. Carnegie, observing this in passing, stopped the train, and jumping off the engine proceeded to release the wires. The first one loosened bounded up and cut a severe gash in his cheek, and he entered the city bleeding profusely. So far as is known, he was the third man injured in the war in the service of the Union, two soldiers having been hurt a few days before while passing through Baltimore.

At the battle of Bull Run Carnegie was on the field in charge of the railway communication, and was the last official to leave for Alexandria. As an attack upon Alexandria was expected during the night, many of the railway staff escaped across the Potomac, and much difficulty was experienced in manning the trains next morning.

Another commercial enterprise into which Mr. Carnegie entered shortly afterward turned out still more advantageously. In company with several others, he purchased the now famous Storey Farm on Oil Creek, Pa., where a well had been bored and natural oil struck the year before. Mr. Carnegie can best tell this story in his own words. . . .

"When I first visited this famous well the oil was running into the creek, where a few flat-bottomed scows lay filled with it, ready to be floated down to the

Alleghany river upon an agreed-upon day each week, when the creek was flooded by means of a temporary dam. This was the beginning of the natural-oil business. We purchased the farm for forty thousand dollars, and so small was our faith in the ability of the earth to yield for any considerable time the hundred barrels per day which the property was then producing, that we decided to make a pond capable of holding one hundred thousand barrels of oil, which, we estimated, would be worth, when the supply ceased, one million dollars.

"Unfortunately for us the pond leaked fearfully; evaporation also caused much loss, but we continued to run oil in to make the losses good, day after day, until several hundred thousand barrels had gone in this fashion. Our experience with the farm may be worth reciting. Its value rose to five million dollars; that is, the shares of the company sold in the market upon this basis, and one year it paid in cash dividends of one million dollars, — rather a good return upon an investment of forty thousand dollars."

But Carnegie was not satisfied with these enterprises, and was soon busy with other industrial conquests. Railway bridges were then built almost exclusively of wood, but the Pennsylvania railroad, always foremost in improvements, had begun to experiment with cast iron for bridge building. Carnegie, recognizing that the railway bridge of the future was to be of iron, organized in Pittsburg a company for the construction of iron bridges, — the first step on the road to the preeminence that he has attained as the largest iron and steel master in the world.

The Keystone Bridge Works, thus established, were remunerative from the beginning, and built the first iron bridge across the Ohio River. The Union Iron Mills soon followed, and later the now famous Edgar Thomson steel-rail mill. The last was the outcome of a visit to England in 1868, when Carnegie noticed that English railways were discarding iron for steel rails. The Bessemer process had then been perfected, and was making its way in all the iron-producing countries. Carnegie, recognizing that it was destined to revolutionize the iron business, introduced it into his mills and made steel rails with which he was enabled to compete with English manufacturers.

His next enterprise was the purchase of the Homestead Steel Works,— his great rival at Pittsburg. By 1888 he had built or acquired seven distinct iron and steel works, all of which are now included in the Carnegie Steel Company, Limited. All the plants of this great firm are within a radius of five miles of Pittsburg. In probably no other part of the world can be found such an aggregation of splendidly equipped steel works as those controlled by this association. . . .

To build up this immense business within a single generation, and to shape its destinies so successfully as to make it not only the equal, but the superior, of all similar industries on the globe, is a feat of which any man might be proud and which few men have the capacity to accomplish. That Mr. Carnegie has accomplished it is a proof not only that he possesses a phenomenal business capacity, but also that he is a born ruler of men. I have often heard him say that the man who succeeds best in the world is he who knows

how to avail himself of the labor of other men. In this Mr. Carnegie is pre-eminent. His fine instincts and keen judgment enable him to see at a glance, and in their true perspective, the capacities and capabilities of both men and things. He seems to see intuitively what a man can do, and he thoroughly trusts every man whom he employs.

Mr. Carnegie is a strong advocate of the payment of labor on a sliding scale, based upon the prices obtained for the products manufactured. This system, which he introduced seven years ago, has worked to the entire satisfaction of the men and the entire company. The workmen, Mr. Carnegie explains, are thus made partners in the business without risk to themselves, being always sure of at least moderate wages, as a minimum wage is provided for, and always certain to share promptly with the firm in any advance of prices. The business correspondence of the firm is laid every month before a committee appointed by the men themselves, and these representatives of the working force, after due examination, strike an average which forms the basis for the ensuing month.

To induce them to save, every workman is allowed to deposit part of his savings, not exceeding $2000, with the firm, on which the high interest rate of six per cent is allowed. The firm also lends to any of its workmen money to buy a lot or to build a house, taking its payment by instalments. With the exception of a strike at the Homestead Works, there has never been any serious difference between the firm and its men.

Mr. Carnegie attributes the success of his several concerns to the policy he has adopted of giving a personal

interest to men who render exceptional service. There are many such, and every year several more are added to the list of partners. It is the policy of the company to interest every superintendent of works, every head of a department, every exceptional young man. Promotion follows exceptional service, and there is no favoritism.

"My partners," says Mr. Carnegie, "are not only partners, but a band of devoted friends who never have a difference. I have never had to exercise my power, and of this I am very proud. Nothing is done without a unanimous vote, and I am not even a manager or director. I throw the responsibility upon others, and allow them full swing."

Although Mr. Carnegie is "not even a manager or director," his judgment is largely depended upon for the solution of questions that require sagacity and foresight, and he is frequently consulted by his fellow partners, usually by telegraph, as he is no longer a resident of Pittsburg. Every day, in whatever part of the world he may be, a tabulated form carefully filled up, giving the product and details of every department of the works, is mailed to him, thus enabling him to keep thoroughly in touch with his business.

Notwithstanding the drain upon his time and energies, involved in the building up and prosecution of such immense enterprises, Mr. Carnegie has found leisure to indulge in literary work. . . .

Besides his books, Mr. Carnegie has published also many pamphlets and review articles on political and kindred subjects.

Of these articles, "The Gospel of Wealth," published in the *North American Review*, in 1889, and which

formed the main theme of an article by Mr. Gladstone in the *Nineteenth Century Review* for November, 1890, presents in clear and forcible language Mr. Carnegie's sentiments in regard to the rich man's duty to his fellow-man. To quote his own words, — "The man who dies rich, dies disgraced. That is the Gospel I preach, that is the Gospel I practise, and that is the Gospel I intend to practise during what remains of my life."

Mr. Carnegie has told somewhere in one of his public speeches — for he is an orator as well as a writer — how his attention was first turned to the establishment of free libraries. When he began his career as a working boy in Allegheny, a certain Colonel Anderson in that city announced that he would be in his library every Saturday ready to lend books to working boys and men.

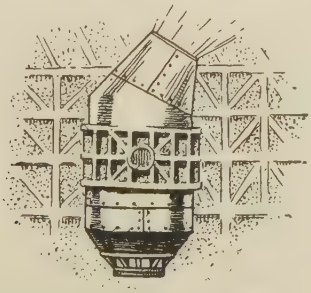
"He had only about four hundred volumes, but I doubt if ever so few books were put to better use. Only he who has longed, as I did, for Saturday to come that the spring of knowledge should be opened anew to him, can understand what Colonel Anderson did for me and others of the boys of Allegheny, several of whom have risen to eminence. Is it any wonder that I resolved that if surplus wealth ever came to me, I should use it in imitating my benefactor?"

Mr. Carnegie's philanthropic generosity, which is by no means wholly represented in his munificent gifts for the establishment of free libraries, has won for him the respect and esteem of thinking men the world over, and has brought him other rewards, of which he is very proud, among them the freedom of seven cities of his native land, including the capital. But greater than

all to him must be the consciousness that he has been enabled, through his own exertions, to do something for the service of his fellow man, something that tends to elevate the race. I cannot conclude better than by quoting his own words in an address before the Nineteenth Century Club, of New York: —

"What a man owns is already subordinate in America to what he knows; but in the final aristocracy the question will not be either of these, but what has he done for his fellows? Where has he shown generosity and self-abnegation? When has he been a father to the fatherless? And the cause of the poor, — where has he searched that out? How he has worshipped God will not be asked in that day, but how he has served man."

But notwithstanding this strong expression of his sentiments, Mr. Carnegie does not believe in indiscriminate charity, which he thinks is too often misplaced. His view is that "of every thousand dollars given, nine hundred and fifty had better have been thrown into the sea," and that "to help only those who help themselves should be the aim of every giver." He has often expressed his reluctance to accept the title of philanthropist, which, he holds, usually "means a man who has good impulses, but is destitute of good sense."



A Steel Converter.

WILLIAM CAXTON

By B. B. EDWARDS.

IN 1299, the Bishop of Winchester borrowed a Bible, in two volumes, folio, from a convent in that city, giving a bond, drawn up in the most formal and solemn manner, for its due return. This Bible had been given to the convent by a former Bishop, and, in consideration of this gift and one hundred marks, the monks founded a daily mass for the soul of the donor. In the same century, several Latin Bibles were given to the University of Oxford, on condition that the students who read them should deposit a cautionary pledge. And even after manuscripts were multiplied, by the invention of linen paper, it was enacted by the statutes of St. Mary's College, at Oxford, in 1446, that "no scholar shall occupy a book in the library above one hour, or two hours at most, lest others should be hindered from the use of the same."

Money was often lent on the deposit of a book; and there were public chests in the universities and other seminaries, in which the books so deposited were kept. They were often particularly named and described in wills, generally left to a relative or friend, in fee, and for the term of his life, and afterwards to the library of some religious house.

"When a book was bought," observes Mr. Walton, "the affair was of so much importance, that it was customary to assemble persons of consequence and character, and to make a formal record that they were present on the occasion." The same author adds: "Even as late as the year 1471, when Louis XI., of France, borrowed the works of the Arabian physician, Rhasis, from the faculty of medicine, at Paris, he not only deposited, by way of a pledge, a valuable plate, but was obliged to procure a nobleman to join with him as party in a deed, by which he bound himself to return it, under a considerable forfeiture."

Long and violent altercations, and even lawsuits, sometimes took place, in consequence of the disputed property of a book.

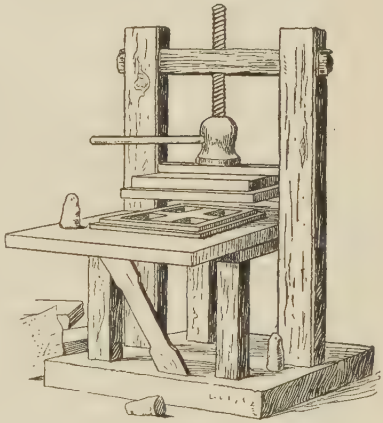
Books were so scarce in Spain in the tenth century, that several monasteries had among them only one copy of the Bible, one of Jerome's Epistles, and one of several other religious books. There are some curious instances given by Lupus, abbot of Ferrieris, of the extreme scarcity of classical manuscripts in the middle of the ninth century. He was much devoted to literature, and from his letters appears to have been indefatigable in his endeavors to find out such manuscripts, in order to borrow and copy them. In a letter to the Pope, he

earnestly requests of him a copy of Quintilian, and of a treatise of Cicero; "for," he adds, "though we have some fragments of them, a complete copy is not to be found in France."

In two other of his letters, he requests of a brother abbot the loan of several manuscripts, which he assures him shall be copied and returned as soon as possible, by a faithful messenger. Another time he sent a special messenger to borrow a manuscript, promising that he would take very great care of it, and return it by a safe opportunity, and requesting the person who lent it to him, if he were asked to whom he had lent it, to reply to some near relation of his own, who had been very urgent to borrow it. Another manuscript, which he seems to have prized much, and a loan of which had been so frequently requested, that he thought of *banishing* it somewhere, that it might not be destroyed or lost, he tells a friend he may perhaps lend him when he comes to see him, but that he will not trust it to the messenger who had been sent for it, though a monk and trustworthy, because he was travelling on foot.

Respecting the price of manuscript books, we are not in the possession of many facts. Plato paid one hundred minæ, equal to $1875, for three small treatises by Philolaus, the Pythagorean. After the death of Speusippus, Plato's disciple, his books, few in number, were purchased by Aristotle, for about $3375. It is said, that St. Jerome nearly ruined himself by the purchase of religious works alone. Persons of moderate fortunes could not afford the means of procuring them, nor the rich even without the sacrifice of some luxuries.

The mere money which was paid for them in the dark ages, whenever a person distinguished himself for his love of literature, was seldom the sole or the principal expense. It was often necessary to send to a great distance and to spend much time in finding out where they were. In the ninth century, an English bishop was obliged to make five journeys to Rome, principally in order to purchase books. For one of his books thus procured, king Alfred gave him an estate of eight hides of land, or as much as eight ploughs could till. About the period of the invention of cotton paper, 1174, the homilies of St. Bede and St. Augustine's Psalter were bought by a prior in Winchester, from the monks of Dorchester, in Oxfordshire, for twelve measures of barley and a pall richly embroidered in silver.



Early Printing Press.

Stow informs us, that in 1274, a Bible, in nine volumes, fairly written, with a gloss, or comment, sold for fifty marks, or $166. About this time the price of wheat averaged 83c. a quarter, a laborer's wages were about three cents a day, a harvest-man's, four cents. On a blank page of Comestor's Scholastic History, deposited in the British Museum, it is stated that this manuscript was taken from the king of France, at the battle of Poictiers. It was afterward purchased by the earl of Salisbury for a hundred marks, or about

$333. It was directed, by the last will of his countess, to be sold for forty livres. At this time the king's surgeon's pay was $28 per annum, and one quarter a day besides. Master carpenters had eight cents a day ; their servants four cents. . . .

The countess of Anjou paid for a copy of the homilies of Bishop Haiman two hundred sheep, five quarters of wheat, five quarters of barley, and five quarters of millet. On the conquest of Paris, in 1425, the duke of Bedford sent the royal library to England. It consisted of only eight hundred and fifty-three volumes, but it was valued at more than two thousand two hundred pounds sterling. . . .

William Caxton was born in the weald of Kent, England, about the year 1412. At this period learning of all kinds was in a much more depressed state in England than in most of the continental countries, in consequence, principally, of the civil war in which the nation was embroiled, the habits of restlessness thus produced, and the constant preoccupation of the time and thoughts of men in promoting the cause they espoused, and in protecting their lives and property. Under these circumstances the most plain and common education was often neglected. Caxton's parents, however, performed their duty to him. "I am bounden," says he, "to pray for my father and mother, that in my youth sent me to school, by which, by the sufferance of God, I get my living, I hope, truly."

When he was about fifteen or sixteen he was put an apprentice to William Large, a mercer of London, and afterwards mayor. The name *mercer* was given at that time to general merchants, trading in all kinds of

goods. After he had served his apprenticeship, Caxton took up his freedom in the mercers' company, and became a citizen of London. Some subsequent years he spent in travelling in various countries on the continent of Europe. In 1464, he was appointed ambassador to the court of the Duke of Burgundy. During his residence in the Low Countries he acquired or perfected his knowledge of the French language, gained some knowledge of Flemish or Dutch, imbibed a taste for literature and romance, and, at great expense, made himself master of the art of printing.

About 1472, Caxton returned to England, and introduced, in all probability, the art of printing into that country. The common opinion is that the "Game of Chess" was the first book printed by Caxton, though Mr. Dibdin thinks that the "Romance of Jason" was printed before it. Caxton was most indefatigable in cultivating his art. Besides the labor necessarily attached to his press, he translated not fewer than five thousand closely printed folio pages, though well stricken in years. The productions of his press amount to sixty-four. In 1480, he published his Chronicle, and his description of Britain, which is usually subjoined to it. These were very popular, having been reprinted four times in *this century* and seven times in the *sixteenth century*.

"After divers works," says he, "made, translated and achieved, having no work in hand, I, sitting in my study, where, as lay many divers pamphlets and books, it happened that to my hand came a little book in French, which lately was translated out of Latin, by some noble clerk of France, which book is named

'Æneid,' as made in Latin by that noble person and great clerk, Virgil, which book I saw over, and read therein. . . . In which book I had great pleasure, by cause of the fair and honest terms and words in French, which I never saw tofore like, ne none so pleasant, ne so well ordered; which book, as me seemed, should be much requisite to noble men to see, as well for the eloquence as histories. And when I had advised me in this said book, I deliberated, and concluded to translate it into English; and forthwith took a pen and ink and wrote a leaf or twain, which I oversaw again, to correct it; and when I saw the fair and strange terms therein, I doubted that it should not please some gentlemen which late blamed me, saying that in my former translations I had over curious terms, which could not be understood of common people; and desired me to use old and homely terms in my translations; and fain would I satisfy every man, and so to do, took an old book and read therein: and certainly the English was so rude and broad, that I could not well understand it; and also, my lord abbot of Westminster, did show to me late certain evidences, written in old English, for to reduce it into our English now used; and certainly it was written in such wise, that was more like to Dutch than to English. I could not reduce, nor bring it to be

Caxton's Printing Office.

understanden. Certainly the language now used varieth far from that which was used and spoken when I was born; for we, Englishmen, been born under the domination of the moon, which is never at rest, but ever wavering. The most quantity of the people understand not Latin nor French in this realm of England."

Caxton seems to have been much puzzled and perplexed about the language he should use in his translations; for, while some advised him to use old and homely terms, others, "honest and great clerks," he adds, "have been with me, and desired me to write the most curious terms that I could find, — and thus, betwixt plain, rude and curious, I stand abashed."

Among the books which Caxton published were two editions of Chaucer's Tales. He seems to have had a veneration for the memory of this poet, and to have formed, with sound judgment and good taste, a most correct and precise estimate of the peculiar merits of his poetry. As a proof of the former, we may mention, that Caxton, at his own expense, procured a long epitaph to be written in honor of Chaucer, which was hung on a pillar near the poet's grave in Westminster Abbey. The following remarks of Caxton show that he was able thoroughly to relish the merits and beauties of Chaucer's poetry.

"We ought to give a singular laud unto that noble and great philosopher, Geoffrey Chaucer, the which, for his ornate writings in our tongue, may well have the name of a laureate poet. For tofor, that he embellished and ornated and made fair our English, in this realm was made rude speech and incongruous, as yet appeareth by old books, which, at this day ought not to have

place, ne be compared unto his beauteous volumes and ornate writings, of whom he made many books and treatises of many a noble history, as well in metre as in rhyme and prose; and then so craftily made, that he comprehended his matters in short, quick and high sentences, eschewing perplexity; casting away the chaff of superfluity, and showing the picked grain of sentence, uttered by crafty and *sugared eloquence*. In all his works he excelled, in mine opinion, all writers in our English, for he writeth no void words, but all his matter is full of high and quick sentence, to whom ought to be given laud and praise for his noble making and writing."

Caxton died in 1490–1, was buried in St. Margaret's, and left some books to that church. "His character," says his biographer, "may be collected from the account we have given of his labors. He was possessed of good sense and sound judgment; steady, persevering, active, zealous and liberal in his services for that important art which he introduced into England; laboring not only as printer, but as translator and editor."

LIFE OF BENVENUTO CELLINI

BENVENUTO CELLINI

Benvenuto Cellini, who won great distinction as a goldsmith, engraver and sculptor, was born in Florence, November 3, 1500. According to his own account his moral character was based on the low standard that prevailed in the Italian cities of his day, but his genius caused him to be protected by those high in power. He worked in Rome, Florence, Mantua, Naples and Paris, where many of his masterpieces are preserved. His autobiography, begun in 1558, is regarded as a classic. He died in Florence, February 13, 1571.

LIFE OF BENVENUTO CELLINI

(From His Autobiography.)

Benvenuto Cellini.

ANDREA CELLINI was still living when I was about three years of age, and he then above a hundred.

They had one day removed a water pipe, and there came out of it a large scorpion, which they had not perceived: it descended upon the ground, and was got under a great bench, when I saw it and ran to take hold of it. This scorpion was of such a size, that whilst I held it in my little hand, it put out its tail on one side, and on the other darted its two mouths: I ran overjoyed to my grandfather, crying out:

"Grandfather, see my pretty little crab!"

The good old man, who knew it to be a scorpion, was so frightened that he seemed ready to drop down dead, and begged it of me with great eagerness; but I grasped

it the harder, and cried, for I did not choose to part with it.

My father, who was in the house, flew to my assistance upon hearing the noise, but was struck with such terror and surprise, at the sight of that venomous reptile, that he could not think of any means of rescuing me from my perilous situation. But happening, just at that instant, to espy a pair of scissors, he gently laid hold of them, and humoring me all he could, he cut off the tail and the head of the scorpion; then finding I had received no harm, he pronounced it a happy omen.

The Good Old Man Was so Frightened.

When I was about five years of age, my father happened to be in a little room in which they had been washing, and where there was a good fire of oak burning: with a fiddle in his hand he sang and played near the fire, the weather being exceedingly cold: he looked at this time into the flames, and saw a little animal resembling a lizard, which could live in the hottest part of that element; instantly perceiving what it was, he called for my sister, and after he had shown us the creature, he gave me a box on the ear; I fell a crying, while he, soothing me with his caresses, spoke these words:

"My dear child, I don't give you that box for any fault you have committed, but that you may recollect that the little creature which you see in the fire is a

salamander; such a one as never was beheld before, to my knowledge." So saying he embraced me and gave me some money.

My father began to teach me to play upon the flute, and to sing by note, and though I was very young, at an age when children, generally speaking, are highly pleased with piping, and such other amusements, I had the utmost aversion for it, and played and sang merely in obedience to his authority. My father at that time made surprising organs with tubes of wood, the finest and best harpsichords that were to be seen in those days, fiddles, lutes, and most beautiful and excellent harps. He was an engineer, and constructed a variety of machines, such as draw-bridges, fulling-mills, etc. He worked admirably in ivory, and was the first that excelled in that branch.

But as he was also musically inclined, insomuch that this art having engrossed his whole thoughts and attention, he was requested by the court musicians to join with them; and as he was willing to oblige them they made him one of their band.

Lorenzo de' Medici, and Pietro his son, who were very much his friends, seeing afterwards that he attached himself entirely to music, and neglected his business as an engineer, and his admirable art of working in ivory, removed him from that place. This my father highly resented, and thought himself very ill-used by his patrons.

He therefore on a sudden applied again to his business, and made a looking-glass about a cubit in diameter of bone and ivory, adorned with carved figures and foliages, with the finest polish and the most admirable ele-

gance of design. It was in the form of a wheel; the mirror was placed in the middle; round it were seven circles, in which the seven virtues were carved in ivory and black bones; and both the mirror and the figures of the virtues were balanced in such manner, that the wheel turning round, all the virtues moved at the same time, and had a weight to counterpoise them at their feet, which kept them in a straight direction. As he had a smattering of the Latin language, he carved a verse round the mirror, the purport of which was, "that on which side soever the wheel of fortune turns, virtue stands unshaken upon her feet."

Rota sum semper, quoquo me verto, stat virtus.

A short time after, his place of court musician was restored to him: at that period (which was before I was born) these musicians were all eminent artists; some of them were manufacturers of wood, and others of silk; this was the reason that my father did not think this profession beneath him, and his first desire with regard to me was, that I should become a great player on the flute. I on my part was never more offended than when he touched upon this subject, and when he told me that, if I had a mind, I might become the best musician in the universe. As I have already observed, my father was a staunch friend to the house of Medici, so that when Pietro was banished from Florence, he intrusted him with many affairs of consequence.

The illustrious Pietro Soderini having been elected Gonfalonier, when my father was in his service in quality of musician, that great statesman discovered

his extraordinary genius, and began to have recourse to him in many matters of importance.

At this time my father, when I was of a tender age, caused me to be carried upon a person's shoulders to play upon the flute before the senate, and one of their servants supported me all the time. After the music was over, Soderini took pleasure to hear me prattle, and giving me sweetmeats desired my father to teach me the other two elegant arts, as well as music. My father made answer, that he did not intend that I should follow any other business but that of playing upon the flute and composing; for if it pleased God to spare his days, he hoped to make me the most eminent in that profession. To this one of the old gentlemen present replied: —

"For heaven's sake, Cellini, mind what the Gonfalonier says; why should the boy aim at nothing higher all his life than being a musician?"

Thus some time passed until the Medici family was restored; the Cardinal de' Medici, who was afterwards Pope Leo X., immediately upon his return showed the utmost kindness to my father. While the family was in exile, the roundles or pills, signifying that the founder of the family had been a physician, were removed from the coat-of-arms in the front of their palace; and the citizens had caused to be painted in their place the figure of a red cross, which was the arms and crest of the republic: but, at the sudden return of the Medicean princes, the red cross was effaced, and upon the said escutcheon were again painted the red roundles, and the golden field was replaced with the most striking and beautiful decorations.

A few days after died Pope Julius the Second, and the Cardinal de' Medici having repaired to Rome was elected Pope (in 1513) contrary to the general opinion; my father was invited by him to repair to that capital, which would have been greatly for his advantage, but he did not choose to leave Florence: however, instead of being rewarded for it, his place at court was taken from him by Giacopo Salviati, as soon as that nobleman was made Gonfalonier.

For this reason I applied myself to the goldsmith's business; but while I was learning that trade, I, in part, spent my time in practising upon the flute, much against my inclination. For when my father spoke to me in the manner above-mentioned, I requested him to let me draw so many hours a day, telling him that I would dedicate the remainder of it to the flute; upon which he said to me: "Do you not take pleasure in playing on that instrument?" I answered in the negative, because the profession of a musician appeared to me so mean, in comparison of that to which I aspired.

My father then, in the utmost despair, bound me apprentice to the father of the cavalier Bandinelli, who was called Michael Agnolo, goldsmith of Pinzi di Monte, a man of great skill in his art; he had not the honor of being descended from any illustrious race, but was the son of a collier.

This is not intended as a reflection on Bandinelli, who laid the foundation of his family's grandeur; but whatever may be said of his family, I have nothing to allege against himself. When I had staid there a few days, my father took me away from Michael Agnolo, as

being unable to bear me any longer out of his sight; so that I continued, much against my will, to learn to play upon the flute till the age of fifteen. If I should attempt to relate the extraordinary events that befell me till that period, and the great danger to which my life was exposed, I should strike my readers with surprise and astonishment.

Having attained to the age of fifteen, I, against my father's inclination, engaged myself with a goldsmith, named Antonio di Sandro, who was commonly called Marcone. This was an excellent artist, and a very worthy man, high spirited, and generous in every respect; my father would not have him allow me any wages, as it is customary with other workmen; for this reason, that, since I voluntarily applied myself to this art, I might likewise have an opportunity to draw whenever I thought proper: these conditions I readily accepted, and my worthy master was well pleased with having a cheap bargain of me. He had an only son, to whom he often enjoined hard tasks in order to spare me. So great was my inclination to improve that in a few months I rivalled the most skilful journeymen in the business, and began to reap the fruit of my labor. I did not, however, fail to play sometimes, through complaisance to my father, either upon the flute or the horn; and I constantly drew tears and deep sighs from him every time he heard me; indeed I often, through filial piety, gave him that satisfaction, endeavoring to persuade him that I took a particular delight in music.

At this juncture an adventure happened to my brother, which was attended with very serious consequences to us

both: he was two years younger than myself, of a warm temper and the most undaunted courage, qualities which fitted him for the military school of the illustrious Signor Giovanni de' Medici, father to Duke Cosmo, where he became proficient. One Sunday, in the evening, having, between the gates of St. Gallo and Pitti, given a challenge to a young man of twenty, though he was but fourteen himself; he behaved so gallantly that, after wounding the youth dangerously, he was upon the point of either killing him or disarming him. There was a great crowd present, and amongst others were many of his relations; seeing the young man at a dead lift, they took up stones and threw them at my brother's head, who immediately fell to the ground.

I, who happened to be present, unaccompanied with friends and unarmed, cried out to my brother, as loud as I could, to quit the place. But as soon as I saw him fall, I took his sword, and, standing as near him as possible, I confronted a great many swords and stones, till some valiant soldiers, who came from the gate of St. Gallo, saved me from the exasperated multitude. I carried my brother home for dead, and he was with great difficulty brought to himself and afterwards cured; the magistrates condemned our adversaries to a few years' imprisonment and banished me and my brother, for six months, to the distance of ten miles from the city. Thus we took leave of our poor father, who, having no money, gave us his blessing.

For my part, I repaired to Sienna, in quest of an honest goldsmith, whose name was Signor Francesco Castoro; I was well acquainted with him, as I had worked with him some time before at my trade, when

(for some frivolous reason) I had eloped from my father. Signor Castoro received me very kindly, and found me employment, offering me a house for the whole time I should reside at Sienna: I accepted his offer, and brought my brother to the house, where I followed my business for several months, with close application.

Soon after this troublesome affair, the Cardinal de' Medici, afterwards Pope Clement VII., was prevailed upon, by the entreaties of my father, to obtain permission for us to return to Florence. A pupil of my father's, excited by the natural malignity of his temper, desired the cardinal to send me to Bologna, in order to learn to play upon the flute, of a great master, whose name was Antonio: the cardinal told my father that, if he sent me thither, he would give me a letter of recommendation: the old gentleman had the strongest inclination conceivable to oblige the cardinal; and I was glad of that opportunity of seeing the world.

Upon my arrival at Bologna, I undertook to work under a person whose name was Signor Ercole del Piffero, and I began to make money: at the same time, I went every day to receive a lesson on the flute, and soon gained a considerable emolument by that odious profession; but I got much more by my trade, as a goldsmith and jeweller. Having received no assistance from the cardinal, I went to lodge with a miniature-painter, named Scipio Cavaletti, who lived in the street of Our Lady of Baracani, and there I worked for a person named Grazia di Giudeo, with whom I earned a great deal of money.

The six months being expired, I returned to Florence, where Pierino the musician, who had been a pupil to my father, was greatly mortified at my success; but I, through complaisance for my aged parent, waited upon Pierino, and played both upon the horn and flute with a brother of his, whose name was Girolamo. My father, being highly pleased with my performance, said, "I am determined to make a great musician of him, in spite of those who would fain prevent such a genius from shining in the world."

To this Pierino made answer (and what he said was very true), "Your son Benvenuto will acquire more profit, as well as honor, by minding his business as a goldsmith, than by blowing the horn, or any other instrument."

My father was incensed to the last degree, finding I was of the same opinion with Pierino; he therefore said to him in a violent passion, "I was very sensible that you were the person who thwarted me in my design; and you were the cause of my being deprived of the place I held at court, behaving to me with that base ingratitude which is but too frequently the return for the greatest favors; I got the place conferred on you, and you were so base as to undermine me; but mark these words: in less than a few weeks you will rue this black ingratitude."

Pierino made answer, "Signor Giovanni Cellini, most men when they advance in years begin to dote: this is your case; nor am I surprised at it, as you have already lavished all your substance, without reflecting that you were likely to want: now I, for my part, propose taking a quite different course; I intend to leave so

much to my sons that they shall be able to assist yours."

To this my father replied, "No bad tree ever brings forth good fruit, but the reverse; and I must tell you that, if you be a bad man, your sons will be fools and indigent, and come to beg of my children, who shall be crowned with affluence."

At this they parted, grumbling and railing at each other.

I, who, as it was reasonable, took my worthy father's part, said to him at quitting the house, that I intended to revenge the affront he had received from that scoundrel, if he would give me leave to dedicate my talents to the art of design.

My father made answer, "Dear child, I have been myself in my time a master of that art; but will you not, in your turn, promise me, by way of recreation, after your business is done, and for my sake, who am your father, who have begot you, educated you, and laid the foundation of so many shining qualifications, sometimes to take in hand your flute and cheerful horn, and play for your pastime and amusement?"

I made answer that I would readily comply with his desire. My good father then rejoined that the virtues which I displayed to the world would be the best revenge I could take for the affronts and abusive language he had received from his enemies. Before the month was expired, it happened that the above-mentioned Pierino, causing a vault to be made to a house he had in the street Dello Studio and being one day in a room on the ground floor over the vault which was then

repairing, entered into conversation with some company, and spoke of his master, who was no other than my father, repeating the prophetical words which the latter had uttered concerning his approaching ruin.

Scarce had he made an end of his discourse when the chamber in which he then stood, suddenly sunk in, either because the vault had been unskilfully constructed, or through an effect of the Divine vengeance, which, though late, never fails to overtake offenders.

Some of the stones and bricks, falling with him, broke both his legs, while the rest of the company, standing upon the extremities of the vault, received no manner of hurt, but remained in the utmost surprise and astonishment at what they saw; and most of all at what he had said to them a little before in a scoffing mood.

My father, having heard of this accident, went to see him; and, in the presence of his father, whose name was Niccolajo da Volterra, trumpeter to the senate, addressed him in these words: "My dear pupil Pierino, I am very sorry for your misfortune; but you may remember that it is but a short time since I apprised you of it; and my prophecy will likewise be verified with regard to our children."

Soon after the ungrateful Pierino died of the consequences of his fall; and left behind him a wife of bad character, and a son, who, a few years after, came to me at Rome, asking charity: I gave him an alms, as well because I am naturally of a charitable disposition, as by reason I could not without tears recollect the affluence with which Pierino was surrounded when my father spoke the words above mentioned.

Continuing to apply close to my business as a goldsmith, by the emoluments arising from thence I assisted my good father, as well as my brother Cecchino, whom he caused to be instructed in the Latin language; for, as he intended I should be the best player upon the flute in the world, it was his desire that my younger brother should be a man of learning and a profound civilian. He was not, however, able to force nature, which gave me a turn for drawing, and made my brother, who had a fine person, entirely devote himself to the military profession.

This brother of mine, having in his early youth learned the first rudiments of war, under that renowned commander, Giovanni de' Medici, returned to my father's house, at a time that I happened to be out of the way; as he was very much in want of clothes, he applied to my sister, who, unknown to my father, gave him a new surtout and a cloak, which belonged to me; for, besides assisting my father and my sisters, who were virtuous and deserving girls, I had, by the profits arising from my extraordinary application, contrived to purchase this handsome apparel.

A New Surtout and a Cloak which belonged to Me.

Finding my clothes gone, and my brother disappearing, I said to my father, "How could you suffer me to be wronged in such a manner, when you see I spare no toil nor trouble to assist the family?"

He made answer that I was his good and worthy son, but that what I thought a loss I should find to be true gain; adding that it was a duty incumbent on us, and the command of God himself, that he who had property should share it with him that had none; and that if I would for his sake patiently bear the wrong I had suffered, God would increase my store and pour down blessings upon me.

I behaved to my poor afflicted father like an inexperienced young man; and, taking with me what little money and clothes I had left, I bent my course towards one of the city gates; and not knowing which of them led to Rome, I travelled to Lucca and from thence to Pisa.

Upon my arrival at Pisa, when I was about sixteen, I stopped hard by the middle bridge, near a goldsmith's shop, and looked attentively at the master whilst he was at work; he asked me my name, and what business I followed: I made answer, that I worked a little in the same branch that he did.

The man, upon that, bade me come in, and, setting before me some tools to work with, he told me that my physiognomy induced him to believe that I was an honest youth; so saying, he laid before me gold, silver, and jewels; and, after I had finished my first day's task, he carried me to his house, where he lived very genteelly with his wife and children. I then called to mind the concern which my father must have had upon my account, and wrote him word that I was at the house of a very worthy tradesman, one Signor Ulivieri dello Chiostro; and that, under him, I worked in my profession; I therefore desired him to make himself

easy, as I was learning my business, and hoped soon to procure him both profit and honor by my improvement.

He immediately wrote me an answer, the purport of which was as follows: "My dear son, so great is the love I bear you that I should instantly set out for the place where you now reside, were it not that the laws of honor, which I always adhere to, prevent me; for I think myself deprived of the light of my eyes every day that I am without seeing you, as I did formerly, when I gave you the best instructions."

This letter fell into the hands of my master Ulivieri, who read it to himself, and then said to me, "Thy good looks, Benvenuto, did not deceive me, as I find by a letter from thy father which has fallen into my hands; he must, doubtless, be a man of worth, therefore consider thyself as in thy own house, and under the care of thy father."

While I was staying at Pisa I went to see the Campo Santo, where I discovered a great number of antiquities, such as large marble chests; and, in many parts of the town, I saw other monuments of antiquity, which afforded me constant amusement, whenever I was disengaged from the business of the shop. As my master came daily, with great good-nature, to see me at the little apartment which he had assigned to my use, when he found that I spent all my time in laudable and virtuous occupations, he conceived as strong an affection for me as if he had been my father.

I improved considerably, during a year's stay in that city, and executed several fine pieces of workmanship, which inspired me with an ardent desire to become

more eminent in my profession. My father, at this juncture, wrote to me very affectionately to come home, and, in every letter, exhorted me not to neglect my flute, in which he had taken so much pains to instruct me; upon this I entirely lost all inclination to return to him, and to such a degree did I hate that abominable flute that I thought myself in a sort of paradise during my stay at Pisa, where I never once played upon that instrument.

At the expiration of the year, Signor Ulivieri happened to have occasion to go to Florence, to dispose of some filings of gold and silver; and, as I had in that unwholesome air caught a slight fever, I returned, whilst it was upon me, with my master, to Florence; where my father secretly entreated my master, in the most urgent manner, not to carry me back again to Pisa. My fever still continuing, I kept my bed about two months, and my father attended me with the greatest affection imaginable; telling me repeatedly that he thought it a thousand years till I recovered that he might hear me play on the flute: and feeling my pulse, as he had a smattering of physic and some learning, he perceived so great a change in it, whenever he mentioned the flute, that he was often frightened and left me in tears.

Observing then the great concern he was in, I bade one of my sisters bring me a flute, for though I had a fever constantly upon me, the instrument was a very easy one and would do me no hurt. I thereupon played with such skill and dexterity that my father, entering the room on a sudden, gave me a thousand blessings, assuring me that, during my absence from

him, I had made great improvement; he requested me, moreover, that I would endeavor to continue my progress and not neglect so admirable a qualification. No sooner had I recovered my health than I returned to my goldsmith Marcone, who put me in a way of making money, and with my gains I assisted my father and my relations.

OLIVER CROMWELL

(Born 1599 — Died 1658.)

By NATHANIEL HAWTHORNE.

Oliver Cromwell.

NOT long after King James I. took the place of Queen Elizabeth on the throne of England, there lived an English knight at a place called Hinchinbrooke. His name was Sir Oliver Cromwell. He spent his life, I suppose, pretty much like other English knights and squires in those days, hunting hares and foxes, and drinking large quantities of ale and wine. The old house in which he dwelt had been occupied by his ancestors before him for a good many years. In it there was a great hall, hung round with coats-of-arms and helmets, cuirasses and swords, which his forefathers had used in battle, and with horns of deer and tails of foxes which they or Sir Oliver himself had killed in the chase.

This Sir Oliver Cromwell had a nephew, who had been called Oliver, after himself, but who was generally known in the family by the name of little Noll. His father was a younger brother of Sir Oliver. The child was often sent to visit his uncle, who probably found him a troublesome little fellow to take care of. He was forever in mischief, and always running into some danger or other, from which he seemed to escape only by a miracle.

Even while he was an infant in the cradle a strange accident had befallen him. A huge ape, which was kept in the family, snatched up little Noll in his fore paws and clambered with him to the roof of the house. There this ugly beast sat grinning at the affrighted spectators, as if it had done the most praiseworthy thing imaginable. Fortunately, however, he brought the child safe down again; and the event was afterwards considered an omen that Noll would reach a very elevated station in the world.

One morning, when Noll was five or six years old, a royal messenger arrived at Hinchinbrook with tidings that King James was coming to dine with Sir Oliver Cromwell. This was a high honor, to be sure, but a very great trouble; for all the lords and ladies, knights, squires, guards, and yeomen, who waited on the king, were to be feasted as well as himself; and more provisions would be eaten and more wine drunk in that one day than generally in a month. However, Sir Oliver expressed much thankfulness for the king's intended visit, and ordered his butler and cook to make the best preparations in their power. So a great fire was kindled in the kitchen; and the neighbors knew

by the smoke which poured out of the chimney that boiling, baking, stewing, roasting, and frying were going on merrily.

By and by the sound of trumpets was heard approaching nearer and nearer; and a heavy, old-fashioned coach, surrounded by guards on horseback, drove up to the house. Sir Oliver, with his hat in his hand, stood at the gate to receive the king. His majesty was dressed in a suit of green not very new; he had a feather in his hat and a triple ruff round his neck, and over his shoulder was slung a hunting-horn instead of a sword. Altogether he had not the most dignified aspect in the world; but the spectators gazed at him as if there was something superhuman and divine in his person. They even shaded their eyes with their hands, as if they were dazzled by the glory of his countenance.

King James I.

"How are ye, man?" cried King James, speaking in a Scotch accent; for Scotland was his native country. "By my crown, Sir Oliver, but I am glad to see ye!"

The good knight thanked the king; at the same time kneeling down while his majesty alighted. When King James stood on the ground, he directed Sir Oliver's attention to a little boy who had come with him in the coach. He was six or seven years old, and wore a hat and feather, and was more richly dressed than the king

himself. Though by no means an ill-looking child, he seemed shy or even sulky; and his cheeks were rather pale, as if he had been kept moping within doors, instead of being sent out to play in the sun and wind.

"I have brought my son Charlie to see ye," said the king. "I hope, Sir Oliver, ye have a son of your own to be his playmate."

Sir Oliver Cromwell made a reverential bow to the little prince, whom one of the attendants had now taken out of the coach. It was wonderful to see how all the spectators, even the aged men with their gray beards, humbled themselves before this child. They bent their bodies till their beards almost swept the dust. They looked as if they were ready to kneel down and worship him.

The poor little prince! From his earliest infancy not a soul had dared to contradict him; everybody around him had acted as if he were a superior being; so that, of course, he had imbibed the same opinion of himself. He naturally supposed that the whole kingdom of Great Britain and all its inhabitants had been created solely for his benefit and amusement. This was a sad mistake, and it cost him dear enough after he had ascended his father's throne.

"What a noble little prince he is!" exclaimed Sir Oliver, lifting his hands in admiration. "No, please your majesty, I have no son to be the playmate of his royal highness; but there is a nephew of mine somewhere about the house. He is near the prince's age, and will be but too happy to wait upon his royal highness."

"Send for him, man! send for him!" said the king.

But, as it happened, there was no need of sending for Master Noll. While King Charles was speaking, a rugged, bold-faced, sturdy little urchin thrust himself through the throng of courtiers and attendants and greeted the prince with a broad stare. His doublet and hose (which had been put on new and clean in honor of the king's visit) were already soiled and torn with the rough play in which he had spent the morning. He looked no more abashed than if King James were his uncle and the prince one of his customary playfellows.

This was little Noll himself.

"Here, please your majesty, is my nephew," said Sir Oliver, somewhat ashamed of Noll's appearance and demeanor. "Oliver, make your obeisance to the king's majesty."

The boy made a pretty respectful obeisance to the king; for in those days children were taught to pay reverence to their elders. King James, who prided himself greatly on his scholarship, asked Noll a few questions in the Latin grammar, and then introduced him to his son. The little prince, in a very grave and dignified manner, extended his hand, not for Noll to shake, but that he might kneel down and kiss it.

"Nephew," said Sir Oliver, "pay your duty to the prince."

"I owe him no duty," cried Noll, thrusting aside the prince's hand with a rude laugh. "Why should I kiss that boy's hand?"

All the courtiers were amazed and confounded, and Sir Oliver the most of all. But the king laughed heartily, saying, that little Noll had a stubborn English

spirit, and that it was well for his son to learn betimes what sort of a people he was to rule over.

So King James and his train entered the house, and the prince, with Noll and some other children, was sent to play in a separate room while his majesty was at dinner. The young people soon became acquainted; for boys, whether the sons of monarchs or of peasants, all like play, and are pleased with one another's society. What games they diverted themselves with I cannot tell. Perhaps they played at ball — perhaps at blindman's buff — perhaps at leap frog — perhaps at prison bars. Such games have been in use for hundreds of years; and princes as well as poor children have spent some of their happiest hours in playing at them.

"I Owe Him No Duty."

Meanwhile King James and his nobles were feasting with Sir Oliver in the great hall. The king sat in a gilded chair, under a canopy, at the head of a long table. Whenever any of the company addressed him, it was with the deepest reverence. If the attendants offered him wine or the various delicacies of the festival, it was upon their bended knees. You would

have thought, by these tokens of worship, that the monarch was a supernatural being; only he seemed to have quite as much need of those vulgar matters, food and drink, as any other person at the table. But fate had ordained that good King James should not finish his dinner in peace.

All of a sudden there arose a terrible uproar in the room where the children were at play. Angry shouts and shrill cries of alarm were mixed up together; while the voices of elder persons were likewise heard, trying to restore order among the children. The king and everybody else at table looked aghast; for perhaps the tumult made them think that a general rebellion had broken out.

"Mercy on us!" muttered Sir Oliver; "that graceless nephew of mine is in some mischief or other. The naughty little whelp!"

Getting up from table, he ran to see what was the matter, followed by many of the guests and the king among them. They all crowded to the door of the play room.

On looking in, they beheld the little Prince Charles, with his rich dress all torn and covered with the dust of the floor. His royal blood was streaming from his nose in great abundance. He gazed at Noll with a mixture of rage and affright, and at the same time a puzzled expression, as if he could not understand how any mortal boy should dare to give him a beating. As for Noll, there stood his sturdy little figure, bold as a lion, looking as if he were ready to fight, not only the prince, but the king and kingdom too.

"You little villain!" cried his uncle. "What have

you been about? Down on your knees, this instant, and ask the prince's pardon. How dare you lay your hands on the king's majesty's royal son?"

"He struck me first," grumbled the valiant little Noll; "and I've only given him his due."

Sir Oliver and the guests lifted up their hands in astonishment and horror. No punishment seemed severe enough for this wicked little varlet, who had dared to resent a blow from the king's own son. Some of the courtiers were of opinion that Noll should be sent prisoner to the Tower of London and brought to trial for high treason. Others, in their great zeal for the king's service, were about to lay hands on the boy and chastise him in the royal presence.

But King James, who sometimes showed a good deal of sagacity, ordered them to desist.

"Thou art a bold boy," said he, looking fixedly at little Noll; "and, if thou live to be a man, my son Charlie would do wisely to be friends with thee."

"I never will!" cried the little prince, stamping his foot.

"Peace, Charlie, peace!" said the king; then addressing Sir Oliver and the attendants, "Harm not the urchin, for he has taught my son a good lesson, if Heaven do but give him grace to profit by it hereafter; should he be tempted to tyrannize over the stubborn race of Englishmen, let him remember little Noll Cromwell and his own bloody nose."

So the king finished his dinner and departed; and for many a long year the childish quarrel between Prince Charles and Noll Cromwell was forgotten. The prince, indeed, might have lived a happier life,

and have met a more peaceful death, had he remembered that quarrel and the moral which his father drew from it. But when old King James was dead, and Charles sat upon his throne, he seemed to forget that he was but a man, and that his meanest subjects were men as well as he. He wished to have the property and lives of the people of England entirely at his own disposal. But the Puritans, and all who loved liberty, rose against him, and beat him in many battles, and pulled him down from his throne.

Throughout this war between the king and nobles on one side and the people of England on the other, there was a famous leader, who did more towards the ruin of royal authority than all the rest. The contest seemed like a wrestling match between King Charles and this strong man. And the king was overthrown.

When the discrowned monarch was brought to trial, that warlike leader sat in the judgment hall. Many judges were present besides himself, but he alone had the power to save King Charles or to doom him to the scaffold. After sentence was pronounced, this victorious general was entreated by his own children, on their knees, to rescue his majesty from death.

"No!" said he sternly. "Better that one man should perish than that the whole country should be ruined for his sake. It is resolved that he shall die!"

When Charles, no longer a king, was led to the scaffold, his great enemy stood at a window of the royal palace of Whitehall. He beheld the poor victim of pride, and an evil education and misused power, as he laid his head upon the block. He looked on with a steadfast gaze while a black-veiled executioner lifted the

fatal axe and smote off that anointed head at a single blow.

"It is a righteous deed," perhaps he said to himself. "Now Englishmen may enjoy their rights."

At night, when the body of Charles was laid in the coffin, in a gloomy chamber, the general entered, lighting himself with a torch. Its gleam showed that he was now growing old; his visage was scarred with the many battles in which he had led the van; his brow was wrinkled with care and with the continual exercise of stern authority. Probably there was not a single trait, either of aspect or manner, that belonged to the little Noll who had battled so stoutly with Prince Charles. Yet this was he!

His Great Enemy Stood at a Window.

He lifted the coffin lid, and caused the light of his torch to fall upon the dead monarch's face. Then, probably, his mind went back over all the marvellous events that had brought the hereditary King of England to this dishonored coffin, and had raised himself, a humble individual, to the possession of kingly power. He was a king, though without the empty title or the glittering crown.

"Why was it," said Cromwell to himself, or might have said, as he gazed at the pale features in the coffin,

—"why was it that this great king fell, and that poor Noll Cromwell has gained all the power of the realm?"

And, indeed, why was it?

King Charles had fallen, because, in his manhood the same as when a child, he disdained to feel that every human creature was his brother. He deemed himself a superior being, and fancied that his subjects were created only for a king to rule over. And Cromwell rose, because, in spite of his many faults, he mainly fought for the rights and freedom of his fellow-men; and therefore the poor and the oppressed all lent their strength to him.

CHARLES DICKENS

CHARLES DICKENS

Charles Dickens, one of the most popular of the novelists of the last century, was born at Landport, Portsmouth, Feb. 7, 1812. His father, who unconsciously stood for the portrait of Mr. Micawber, was an unpractical optimist, always in debt and always expecting something better to turn up. The following bits of Dickens's autobiography describe his early trials. After his father had received a small legacy and was released from the Marshalsea prison, the family went to Camden, where Charles was sent to school for a short time. After a short service in the employ of a solicitor he became a reporter for a newspaper and taught himself shorthand. When he was twenty-two he secured a permanent newspaper position and began to write short articles that attracted some attention. His "Sketches by Boz" were published in 1836, and the same year he began the "Pickwick Papers." From that time forth he had uninterrupted success. He died suddenly at Gad's Hill, June 6, 1870, and was buried in Westminster Abbey. Bits of his autobiography are included in Forster's Life, and are here brought together.

CHARLES DICKENS

Charles Dickens.

IN an evil hour for me, as I often bitterly thought, James Lamert, the relative who had lived with us in Bayham Street, seeing how I was employed from day to day, and knowing what our domestic circumstances then were, proposed that I should go into the blacking-warehouse, to be as useful as I could, at a salary, I think, of six shillings a week. I am not clear whether it was six or seven. I am inclined to believe, from my uncertainty on this head, that it was six at first and seven afterwards. At any rate, the offer was accepted very willingly by my father and mother, and on a Monday morning I went down to the blacking-warehouse to begin my business life.

It is wonderful to me how I could have been so easily cast away at such an age. It is wonderful to me that, even after my descent into the poor little drudge I had been since we came to London, no one had compassion enough on me — a child of singular abilities, quick,

eager, delicate, and soon hurt, bodily or mentally — to suggest that something might have been spared, as certainly it might have been, to place me at any common school. Our friends, I take it, were tired out. No one made any sign. My father and mother were quite satisfied. They could hardly have been more so if I had been twenty years of age, distinguished at a grammar-school, and going to Cambridge.

The blacking-warehouse was the last house on the left-hand side of the way, at old Hungerford Stairs. It was a crazy, tumble-down old house, abutting of course on the river, and literally overrun with rats. Its wainscoted rooms, and its rotten floors and staircase, and the old gray rats swarming down in the cellars, and the sound of their squeaking and scuffling coming up the stairs at all times, and the dirt and decay of the place, rise up visibly before me, as if I were there again. The counting-house was on the first floor, looking over the coal-barges and the river. There was a recess in it, in which I was to sit and work.

Covering the Pots of Paste-blacking.

My work was to cover the pots of paste-blacking; first with a piece of oil-paper, and then with a piece of blue paper; to tie them round with a string;

and then to clip the paper close and neat, all round, until it looked as smart as a pot of ointment from an apothecary's shop. When a certain number of grosses of pots had attained this pitch of perfection, I was to paste on each a printed label, and then go on again with more pots. Two or three other boys were kept at similar duty down-stairs on similar wages. One of them came up, in a ragged apron and a paper cap, on the first Monday morning, to show me the trick of using the string and tying the knot. His name was Bob Fagin; and I took the liberty of using his name, long afterwards, in "Oliver Twist."

Our relative had kindly arranged to teach me something in the dinner-hour — from twelve to one, I think it was — every day. But an arrangement so incompatible with counting-house business soon died away, from no fault of his or mine; and, for the same reason, my small work-table, and my grosses of pots, my papers, string, scissors, paste-pot, and labels, by little and little, vanished out of the recess in the counting-house, and kept company with the other small work-tables, grosses of pots, papers, string, scissors, and paste-pots, down-stairs. It was not long before Bob Fagin and I, and another boy whose name was Paul Green, but who was currently believed to have been christened Poll (a belief which I transferred, long afterwards again, to my Mr. Sweedlepipe, in "Martin Chuzzlewit"), worked generally side by side. Bob Fagin was an orphan, and lived with his brother-in-law, a waterman. Poll Green's father had the additional distinction of being a fireman, and was employed at Drury Lane Theatre,

where another relation of Poll's, I think his little sister, did imps in the pantomimes.

No words can express the secret agony of my soul as I sunk into this companionship; compared these every-day associates with those of my happier childhood; and felt my early hopes of growing up to be a learned and distinguished man crushed in my breast. The deep remembrance of the sense I had of being utterly neglected and hopeless; of the shame I felt in my position; of the misery it was to my young heart to believe that, day by day, what I had learned and thought and delighted in and raised my fancy and my emulation up by was passing away from me, never to be brought back any more, cannot be written. My whole nature was so penetrated with the grief and humiliation of such considerations, that even now, famous and caressed and happy, I often forget in my dreams that I have a dear wife and children; even that I am a man; and wander desolately back to that time of my life.

My mother and my brothers and sisters (excepting Fanny in the Royal Academy of Music) were still encamped, with a young servant-girl from Chatham workhouse, in the two parlors in the empty house in Gower Street north. It was a long way to go and return within the dinner hour, and usually I either carried my dinner with me, or went and bought it at some neighboring shop. In the latter case, it was commonly a saveloy and a penny loaf; sometimes, a fourpenny plate of beef from a cook's shop; sometimes, a plate of bread and cheese, and a glass of beer, from a miserable old public-house over the way; the Swan, if I remember right, or the Swan and something else that I have forgotten.

Once, I remember tucking my own bread (which I had brought from home in the morning) under my arm, wrapped up in a piece of paper like a book, and going into the best dining-room in Johnson's à la mode beef-house in Clare Court, Drury Lane, and magnificently ordering a small plate of à la mode beef to eat with it. What the waiter thought of such a strange little apparition, coming in all alone, I don't know; but I can see him now staring at me as I ate my dinner, and bringing up the other waiter to look. I gave him a halfpenny, and I wish now that he had n't taken it. . . .

[After Dickens the elder and his family went to live in the Marshalsea prison] the key of the house was sent back to the landlord, who was very glad to get it; and I — small Cain that I was, except that I had never done harm to anyone — was handed over as a lodger to a reduced old lady, long known to our family, in Little College Street, Camden-town, who took children in to board, and had once done so at Brighton; and who with a few alterations and embellishments unconsciously began to sit for Mrs. Pipchin in "Dombey" when she took in me.

She had a little brother and sister under her care then; somebody's natural children, who were very irregularly paid for; and a widow's little son. The two boys and I slept in the same room. My own exclusive breakfast of a penny cottage loaf and a pennyworth of milk, I provided for myself. I kept another small loaf, and a quarter of a pound of cheese, on a particular shelf of a particular cupboard, to make my supper on when I came back at night. They made a hole in the six or

seven shillings, I know well; and I was out at the blacking-warehouse all day, and had to support myself on that money all the week. I suppose my lodging was paid for by my father. I certainly did not pay it myself; and I certainly had no other assistance whatever (the making of my clothes, I think, excepted), from Monday morning until Saturday night. No advice, no counsel, no encouragement, no consolation, no support, from anyone that I can call to mind.

Sundays, Fanny and I passed in the prison. I was at the Academy in Tentenden Street, Hanover Square, at nine o'clock in the morning, to fetch her; and we walked back there together, at night.

I was so young and childish, and so little qualified—how could I be otherwise?—to undertake the whole charge of my own existence, that, in going to Hungerford Stairs of a morning, I could not resist the stale pastry put out at half-price on trays at the confectioners' doors in Tottenham Court Road; and I often spent in that the money I should have kept for my dinner. Then I went without my dinner, or bought a roll or a slice of pudding. There were two pudding-shops between which I was divided, according to my finances. One was in a court close to St. Martin's Church (at the back of the church), which is now removed altogether. The pudding at that shop was made with currants, and was rather a special pudding, but was dear: two penn'orth not being larger than a penn'orth of more ordinary pudding. A good shop for the latter was in the Strand, somewhere near where the Lowther Arcade is now. It was a stout, hale pudding, heavy and flabby, with great raisins in it, stuck in whole, at

great distances apart. It came up hot, at about noon every day; and many and many a day did I dine off it.

We had half an hour, I think, for tea. When I had money enough, I used to go to a coffee-shop, and have half a pint of coffee and a slice of bread-and-butter. When I had no money, I took a turn in Covent Garden market, and stared at the pineapples. The coffee-shops to which I most resorted were, one in Maiden Lane; one in a court — non-existent now — close to Hungerford market; and one in St. Martin's Lane, of which I only recollect that it stood near the church, and that in the door there was an oval glass plate, with COFFEE-ROOM painted on it, addressed towards the street. If ever I find myself in a very different kind of coffee-room now, but where there is such an inscription on glass, and read it backwards on the wrong side MOOR-EEFFOC, — as I often used to do then, in a dismal reverie, — a shock goes through my blood.

I know I do not exaggerate, unconsciously and unintentionally, the scantiness of my resources and the difficulties of my life. I know that if a shilling or so were given me by anyone, I spent it in a dinner or a tea. I know that I worked, from morning to night, with common men and boys, a shabby child. I know that I tried, but ineffectually, not to anticipate my money, and to make it last the week through; by putting it away in a drawer I had in the counting-house, wrapped into six little parcels, each parcel containing the same amount and labelled with a different day. I know that I have lounged about the streets, insufficiently and unsatisfactorily fed. I know that, but for the mercy of God, I

might easily have been, for any care that was taken of me, a little robber or a little vagabond.

But I held some station at the blacking-warehouse too. Besides that my relative at the counting-house did what a man so occupied, and dealing with a thing so anomalous, could, to treat me as one upon a different footing from the rest, I never said, to man or boy, how it was that I came to be there, or gave the least indication of being sorry that I was there. That I suffered in secret, and that I suffered exquisitely, no one ever knew but I. How much I suffered, it is, as I have said already, utterly beyond my power to tell. No man's imagination can overstep the reality. But I kept my own counsel, and I did my work. I knew from the first that if I could not do my work as well as any of the rest, I could not hold myself above slight and contempt. I soon became at least as expeditious and as skilful with my hands as either of the other boys. Though perfectly familiar with them, my conduct and manners were different enough from theirs to place a space between us. They and the men always spoke of me as "the young gentleman." A certain man — a soldier once — named Thomas, who was the foreman, and another named Harry, who was the carman and wore a red

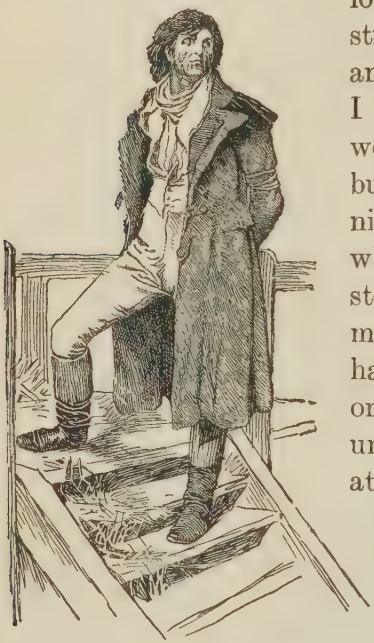
Mr. Micawber, Character in one of Dickens's Novels.

jacket, used to call me "Charles" sometimes, in speaking to me; but I think it was mostly when we were very confidential, and when I had made some efforts to entertain them over our work with the results of some of the old readings, which were fast perishing out of my mind. Poll Green uprose once and rebelled against the "young gentleman" usage; but Bob Fagin settled him speedily.

My rescue from this kind of existence I considered quite hopeless, and abandoned as such altogether, though I am solemnly convinced that I never, for one hour, was reconciled to it, or was otherwise than miserably unhappy. I felt keenly, however, the being so cut off from my parents, my brothers and sisters, and, when my day's work was done, going home to such a miserable blank; and *that*, I thought, might be corrected. One Sunday night I remonstrated with my father on this head, so pathetically and with so many tears, that his kind nature gave way. He began to think that it was not quite right. I do believe he had never thought so before or thought about it. It was the first remonstrance I had ever made about my lot, and perhaps it opened up a little more than I intended. A back-attic was found for me at the house of an insolvent-court agent, who lived in Lant Street in the borough, where Bob Sawyer lodged many years afterwards. A bed and bedding were sent over for me, and made up on the floor. The little window had a pleasant prospect of a timber-yard; and when I took possession of my new abode I thought it was a paradise. . . .

My usual way home was over Blackfriars Bridge, and down that turning in the Blackfriars Road which

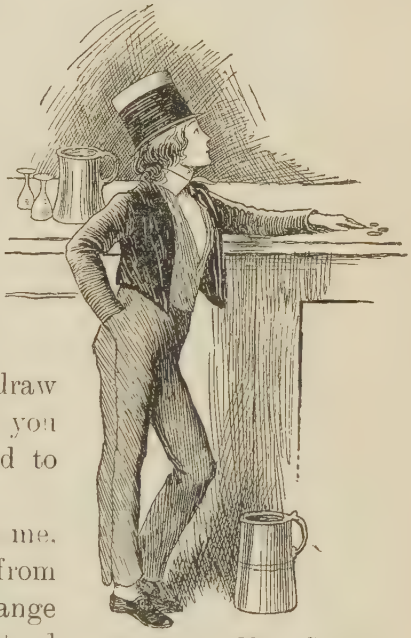
has the Rowland Hill's chapel on one side, and the likeness of a golden dog licking a golden pot over a shop-door on the other. There are a good many little low-browed old shops in that street, of a wretched kind; and some are unchanged now. I looked into one a few weeks ago, where I used to buy boot-laces on Saturday nights, and saw the corner where I once sat down on a stool to have a pair of ready-made half-boots fitted on. I have been seduced more than once, in that street on a Saturday night, by a show-van at a corner; and have gone in, with a very motley assemblage, to see the Fat-pig, the Wild-indian, and the Little-lady. There were two or three hat-manufactories there then (I think they are there still); and among the things which, encountered anywhere or in any circumstances, will instantly recall that time is the smell of hat-making. . . .



Sydney Carton, Character in one of Dickens's Novels.

I was such a little fellow, with my poor white hat, little jacket, and corduroy trousers, that frequently, when I went into the bar of a strange public-house for a glass of ale or porter to wash down the saveloy and the loaf I had eaten in the street, they didn't like to give

it to me. I remember, one evening (I had been somewhere for my father, and was going back to the borough over Westminster Bridge), that I went into a public-house in Parliament Street, — which is still there, though altered, — at the corner of the short street leading into Cannon Row, and said to the landlord behind the bar, "What is your very best — the VERY *best* — ale, a glass?" For the occasion was a festive one, for some reason; I forget why. It may have been my birthday, or somebody else's. "Twopence," says he. "Then," says I, "just draw me a glass of that, if you please, with a good head to it."



"JUST DRAW ME A GLASS OF THAT."

The landlord looked at me in return, over the bar, from head to foot, with a strange smile on his face, and, instead of drawing the beer, looked round the screen and said something to his wife, who came out from behind it, with her work in her hand, and joined him in surveying me. Here we stand, all three, before me now, in my study in Devonshire Terrace. The landlord, in his shirt-sleeves, leaning against the bar window-frame; his wife, looking over the little half-door; and I, in some confusion, looking up at them

from outside the partition. They asked me a good many questions, as, what my name was, how old I was, where I lived, how I was employed, etc. To all of which, that I might commit nobody, I invented appropriate answers. They served me with the ale, though I suspect it was not the strongest on the premises; and the landlord's wife, opening the little half-door and bending down, gave me a kiss that was half admiring and half compassionate, but all womanly and good, I am sure. . . .

[The next scene arose on the occasion of a petition drawn up by the elder Dickens praying for the boon of a bounty to the prisoners to drink his majesty's health on his majesty's forthcoming birthday.]

When I went to the Marshalsea of a night, I was always delighted to hear from my mother what she knew about the histories of the different debtors in the prison; and when I heard of this approaching ceremony, I was so anxious to see them all come in, one after another, — though I knew the greater part of them already, to speak to, and they me, — that I got leave of absence on purpose, and established myself in a corner, near the petition. It was stretched out, I recollect, on a great ironing-board, under the window, which in another part of the room made a bedstead at night. The internal regulations of the place, for cleanliness and order, and for the government of a common room in the ale-house, where hot water and some means of cooking and a good fire were provided for all who paid a very small subscription, were excellently administered by a governing committee of debtors, of which my father was chairman for the time being.

As many of the principal officers of this body as could be got into the small room without filling it up supported him, in front of the petition; and my old friend Captain Porter — who had washed himself, to do honor to so solemn an occasion — stationed himself close to it, to read it to all who were unacquainted with its contents. The door was then thrown open, and they began to come in, in a long file; several waiting on the landing outside, while one entered, affixed his signature, and went out.

To everybody in succession, Captain Porter said, "Would you like to hear it read?" If he weakly showed the least disposition to hear it, Captain Porter, in a loud, sonorous voice, gave him every word of it. I remember a certain luscious roll he gave to such words as "Majesty — gracious Majesty — your gracious Majesty's unfortunate subjects — your Majesty's well-known munificence" — as if the words were something real in his mouth, and delicious to taste; my poor father meanwhile listening with a little of an author's vanity, and contemplating — not severely — the spikes on the opposite wall. Whatever was comical in this scene, and whatever was pathetic, I sincerely believe I perceived in my corner, whether I demonstrated or not, quite as well as I should perceive it now. I made out my own little character and story for every man who put his name to the sheet of paper. I might be able to do that now more truly, not more earnestly or with a closer interest. Their different peculiarities of dress, of face, of gait, of manner, were written indelibly upon my memory. I would rather have seen it than the best play ever played; and I thought about it afterwards,

over the pots of paste-blacking, often and often. When I look, with my mind's eye, into the Fleet Prison during Mr. Pickwick's incarceration, I wonder whether half a dozen men are wanting from the Marshalsea crowd that came filing in again, to the sound of Captain Porter's voice! . . . .

I am not sure that it was before this time, or after it, that the blacking-warehouse was removed to Chandos Street, Covent Garden. It is no matter. Next to the shop at the corner of Bedford Street in Chandos Street are two rather old-fashioned houses and shops adjoining one another. They were one then, or thrown into one, for the blacking-business; and had been a butter-shop. Opposite to them was, and is, a public-house, where I got my ale, under these new circumstances. The stones in the street may be smoothed by my small feet going across to it at dinner-time and back again. The establishment was larger now, and we had one or two new boys. Bob Fagin and I had attained to great dexterity in tying up the pots. I forget how many we could do in five minutes. We worked, for the light's sake, near the second window as you come from Bedford Street; and we were so brisk at it that the people used to stop and look in. Sometimes there would be quite a little crowd there. I saw my father coming in at the door one day when we were very busy, and I wondered how he could bear it.

Now, I generally had my dinner in the warehouse. Sometimes I brought it from home, so I was better off. I see myself coming across Russell Square from Somerstown, one morning, with some cold hotch-potch in a small basin tied up in a handkerchief. I had the same

wanderings about the streets that I used to have, and was just as solitary and self-dependent as before; but I had not the same difficulty in merely living. I never, however, heard a word of being taken away, or of being otherwise than quite provided for.

At last, one day my father, and the relative so often mentioned, quarrelled; quarrelled by letter, for I took the letter from my father to him which caused the explosion, but quarrelled very fiercely. It was about me. It may have had some backward reference, in part, for anything I know, to my employment at the window. All I am certain of is, that, soon after I had given him the letter, my cousin — he was a sort of cousin by marriage — told me he was very much insulted about me, and that it was impossible to keep me after that. I cried very much, partly because it was so sudden, and partly because in his anger he was so violent about my father, though gentle to me. Thomas, the old soldier, comforted me, and said he was sure it was for the best. With a relief so strange that it was like oppression, I went home.

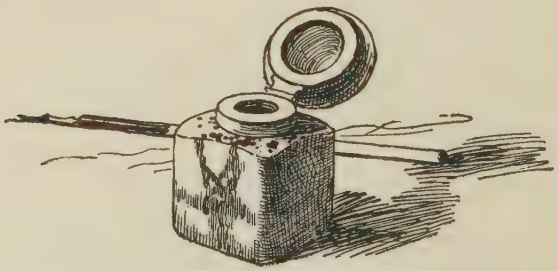
Dickens when a Young Man.

My mother set herself to accommodate the quarrel, and did so next day. She brought home a request for me to return next morning, and a high character of me, which I am very sure I deserved. My father said I should go back no more, and should go to school. I do not write resentfully or angrily; for I know how all

these things have worked together to make me what I am; but I never afterwards forgot, I never shall, I never can forget, that my mother was warm for my being sent back.

From that hour until this at which I write, no word of that part of my childhood which I have now gladly brought to a close has passed my lips to any human being. I have no idea how long it lasted; whether for a year, or much more, or less. From that hour until this my father and my mother have been stricken dumb upon it. I have never heard the least allusion to it, however far off and remote, from either of them. I have never, until I now impart it to this paper, in any burst of confidence with any one, my own wife not excepted, raised the curtain I then dropped, thank God.

Until old Hungerford market was pulled down, until old Hungerford Stairs were destroyed, and the very nature of the ground changed, I never had the courage to go back to the place where my servitude began. I never saw it. I could not endure to go near it. For



Dickens's Inkstand.

many years, when I came near to Robert Warren's in the Strand, I crossed over to the opposite side of the way, to avoid a certain smell of the cement they put

upon the blacking-corks, which reminded me of what I was once. It was a very long time before I liked to go up Chandos Street. My old way home by the borough made me cry, after my eldest child could speak.

In my walks at night I have walked there often, since then, and by degrees I have come to write this. It does not seem a tithe of what I might have written, or of what I meant to write.

THOMAS ALVA EDISON

By E. C. KENYON.

Thomas Edison.

THOMAS ALVA EDISON, the world's greatest living inventor and electrician, was born at Milan, a dull little canal town in Erie County, Ohio, on the 11th of February, 1847. On his father's side he was descended from an excellent family of Dutch millers, who emigrated from Amsterdam to America about the year 1737. They were men who lived long lives — Edison's great-grandfather lived to the age of one hundred and two years, and his grandfather one hundred and three — and from them he inherited the great physical powers of strength and endurance which have marked his wonderful and checkered career. Edison's father, Samuel Edison, was a nurseryman, dealer in grain, in lumber, and in farm lands, and later, a produce merchant.

Edison's mother's maiden name was Nancy Elliot. She was by birth a Scotchwoman, and she had been brought up and educated in Canada. She had a sweet yet strong individuality, and having received a good solid education in the Canadian High Schools, she became a teacher there, in which capacity she displayed great ability, before marrying Samuel Edison.

An amusing story of his early childhood is given to us on the authority of his only sister. When he was only six years old, he found that a goose belonging to the family was sitting, and, a little later, saw the astonishing result in some goslings. He studied this wonderful occurrence in his little mind. Then one day he was missing. He was sought everywhere, but no one could find him, until at length his father discovered him curled up in a sort of nest he had made for himself in the barn, and filled with goose and hen eggs. He was keeping them as warm as he could; in fact, the little boy was sitting on the eggs and trying to hatch them!

He was an ingenious little fellow, and, even when he was at play, showed the mechanical turn of his mind by building plank roads, digging caves, and exploring the banks of the canal. But the play had to be soon exchanged for hard work, for, when he was only seven years old, a wide-spread depression in commercial affairs caused his father to become poorer, and in consequence of this he left his picturesque home in Milan, and took his family to live in the town of Port Huron, Michigan. Here the boy was early set to work to earn his own living, but still he devoted every moment he could to the improvement of his mind.

"I'm a bushel of wheat! I weigh eighty pounds," he said, thoughtfully, to his mother one day when he was only twelve years old. And the observation showed that he had already begun to compare things with each other in an old-fashioned, business-like manner.

Soon after that he became a newsboy on the Grand Trunk Railway running into Detroit. It was a busy life. . . . Edison, with his bright, smiling face and business manner, made a capital little newsboy.

When talking of these young days of his, he was once asked, "Were you one of the kind of train-boys who sell figs in boxes with bottoms half an inch thick?"

To which question he replied, with a merry twinkle of his shrewd gray eyes, "If I recollect right, the bottoms of my boxes were a good inch."

At the stations at which the train stopped, the young newsboy would spring on the platform, and sell his wares to any one who would buy. He had secured the exclusive right as news-agent upon that line.

At Detroit he obtained access to the Free Library, and was so delighted with the sight of unlimited numbers of books that he conceived the idea of reading the entire library, taking the books as they came. He stuck at nothing, reading straight on, and had actually read through fifteen feet of books before his friends discovered what he was about and checked his proceedings. Amongst the books he read were Burton's "Anatomy of Melancholy"; Gibbon's "Decline and Fall of the Roman Empire"; Hume's "History of England"; "History of the Reformation"; Ure's "Dictionary

of the Sciences"; the "Penny Cyclopædia"; and Newton's "Principia"— which last, however, he could not understand. Like a wise lad, therefore, he inquired of one who did, and a comparatively uneducated man gave him a simple and satisfactory explanation.

"This man," said Edison afterwards, "explained the problem to me by the use of very simple language, and without the employment of mathematics. I at once came to the conclusion that Newton could have dispensed his knowledge in a much wider field had he known less about figures." This, he went on to say, gave him a distaste for mathematics from which he never recovered.

Meanwhile, his interest in chemistry continued. He managed to become the proud possessor of retorts and other apparatus, and, obtaining the use of an old baggage-car, turned it into a laboratory. In this place he spent much of his spare time in experiments which caused him both wonder and delight.

Al, as young Edison was called by his fellow-workers on the railroad, was a good son to his parents, and delighted to take home to them as much of his earnings as possible. He also wanted money with which to buy the chemicals to make his experiments. Having no friends who could assist him pecuniarily, he knew that he must depend upon his own exertions. Early and late, therefore, he worked upon the train, and in the stations at selling his newspapers. But at first he did not earn much money by it. He had to be very careful that he did not buy more papers than he could sell in his very limited sphere of operations; and yet he could not afford to take too few, as they would have been

all sold before reaching the end of the trip. This set the boy thinking. It was plain that, to insure a good sale of newspapers, something must be done to arouse the attention of his little public. The time was favorable for making a sensation. The Civil War between the Northern and Southern States was at its height, and the press was full to overflowing with exciting news. He is clever who knows how to seize an opportunity and make use of it. Edison quickly formed, and proceeded to carry out, a capital plan.

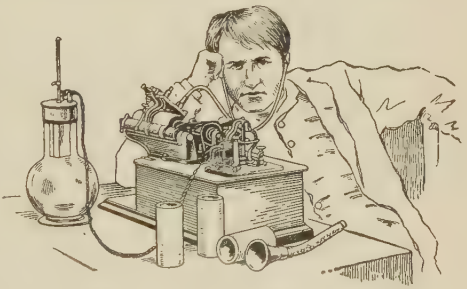
Making a friend of one of the compositors in the *Free Press* office, he persuaded the man to show him every day a first proof of the most important news article. Then, from a study of its headlines, he soon learned to gauge the value of the news and its selling capacity, so as to be able to form a pretty correct idea of the number of papers he would need. Generally he could only dispose of about two hundred, unless there was any special news from the seat of war, when he found he could sell about three hundred.

One day the friendly compositor showed him a proof slip containing a huge headline. It was the first report of the battle of Pittsburg Landing, and it gave the number of killed and wounded as fifty thousand.

Grasping the situation at once, Edison saw that there would be a chance of enormous sales of his newspapers, if only he could get the people along the line acquainted with what had happened. How could he let them know? By what means could he create in them an intense eagerness to get his newspapers? The idea of telegraphing the news before he followed with the papers flashed across his mind.

Instantly running over to a telegraph operator, he made a bargain with him. He was to wire to each of the principal stations on the line, asking the station-master to chalk on the blackboard, upon which was usually notified the times of the departure and arrival of trains, the tidings of the great battle with its enormous loss of life. In exchange for this favor, young Edison agreed to supply the operator with a *Harper's Weekly*, a *Harper's Monthly*, and a daily evening paper for six months from that date.

This bargain made, and the telegraph operator instructed to do his part immediately, Edison turned to the next point, which was to gain possession of all the papers he required for his great effort. This was a matter of no small difficulty, for he had very little money, and who was likely to trust a poor lad like him? However, he boldly went to the superintendent of the delivery department, and asked for one thousand copies of the *Free Press*, to be paid for after they were sold.



Edison and his Phonograph.

The request was curtly and promptly refused.

Edison's need was great; he saw a small fortune in prospect if he could but get the papers. At last, therefore, he took courage to go up-stairs to the office of the proprietor of the *Free Press*, Mr. Wilbur F. Storey.

"I told him who I was," said Edison, when he after-

wards related the story, "and that I wanted fifteen hundred copies of the paper on credit. The tall, thin, ascetic-looking man stared at me for a moment, and then scratched a few words on a slip of paper. 'Take that down-stairs,' he said, 'and you will get what you want.' And so I did. Then I felt happier than I have ever felt in my life since."

Taking his fifteen hundred newspapers away in triumph, Edison got three lads to help him to fold them. Then he went to his train with his newspapers, in great delight; and only anxious on one point, and that was whether his friendly telegraph operator had kept his promise.

At Utica, about twelve miles off, where the train stopped first, he usually sold two papers at five cents each. But now, as the train ran into the station, upon looking eagerly out, he thought he saw an excursion party, for the platform was crowded with people. As soon as they perceived him with some of his newspapers in his hands, they began to gesticulate and shout, and he saw they were clamoring for the papers. Seizing an armful, he jumped out, and very soon sold forty.

The next station was Mount Clemens. Here he thought a riot must be going on, for the platform was crowded with a howling mob. But he soon found that what they wanted was news of the battle of Pittsburg Landing. Those who had friends or relations fighting there were in a state of the utmost suspense and anxiety. Doubling the price of his newspaper, Edison speedily sold a hundred and fifty copies.

At other stations these scenes were repeated. But

the climax was reached when he arrived at Port Huron. The station there was a mile from the town, towards which he at once proceeded with his remaining stock of newspapers. When half-way there, he met a crowd of people hurrying towards the station, and recognized at once that they were wanting newspapers. He therefore raised the price of his newspapers to a quarter of a dollar a copy, and reaped quite a small fortune. On passing a church where service was going on, the whole congregation turned out, and bid against each other for the precious papers.

"You can understand," said Edison, long afterwards, "why it struck me then that the telegraph must be about the best thing going, for it was the telegraphic notices on the bulletin boards that had done the trick. I determined at once to become a telegraph operator. But if it hadn't been for Wilbur F. Storey I should never have fully appreciated the wonders of electrical science."

Thus it was that the boy's mind, hitherto inclined to chemistry, was turned, in admiration and delight, in the direction in which so many of his great inventions were to lie.

The great success of his newspaper enterprises encouraged Edison to make yet another venture. This was nothing less than to start a three-cent newspaper of his own, to be called the *Grand Trunk Herald*.

Accordingly he procured a disused set of old type and stereos, which had been in the possession of the *Detroit Free Press*, and, making use of the little knowledge of printing gained by watching what was

going on in the works when buying his papers, he began to set up and print his small newspaper in his old luggage-car, which he made his office and workshop. Patiently and perseveringly he worked, until at last he could proudly look upon the newspaper of which he was both editor, printer, and publisher.

The journal was very tiny, only twelve by sixteen inches in size. It was filled with railway gossip, changes, and general information which was likely to be of interest to travellers. The news was contributed by the railway men, who took immense interest in the novel enterprise, and by the observant young editor and his assistants — for, with his extended newspaper-selling business, and his new editorial and publishing duties, young Edison now found himself obliged to employ three or four boys.

"My news," said Edison, one day, to Mr. Lathrop, when speaking of this, the first and last newspaper that was ever published on a train — "my news was so purely local that, outside the cars and the shops, I don't suppose it interested a solitary human being. But I was very proud of my bantling, and looked upon myself as a Simon-pure literary man. My items used to run like this: 'John Robinson, baggage-master at James's Creek Station, fell off the platform yesterday and hurt his leg. The boys are sorry for John.' Or it might be, 'No. 3 Burlington engine has gone into the shed for repairs.'"

A fac-simile of the small sheet of the little newspaper has been recently published. It is very amusing, and shows how many items can be found, even in such a limited space as a single line of railway, to interest

those who travel upon it. And also we perceive the crudity of the young editor's professional powers. . . .

Money began to flow into the pockets of the boy-editor from this source, and from the increased sale of his *Detroit Free Press* newspapers. He was able to give his parents as much as five hundred dollars in a year. But, alas! this pecuniary prosperity was not to last.

Encouraged by the success of the *Grand Trunk Herald*, Edison, in conjunction with another lad who had worked for the *Port Huron Commercial*, began to publish a larger and finer journal, entitled *Paul Pry*.

This last paper was really superior to the other, but a boyish love of fun caused the young editors to be a little too personal in their remarks about individuals. This provoked animosity, and one day a contributed article in *Paul Pry* so offended a subscriber that, when he met young Edison on the banks of the St. Clair River, he picked him up and threw him in. Being a good swimmer, the boy soon got out again, but now he felt heartily tired of such dangerous editorial pursuits, and so the paper, *Paul Pry*, came to an untimely end.

The same year Edison's beloved travelling workshop, the old luggage-car, was taken from him. It happened in this way. One day, when he was hard at work, the jolting of the car, which had no springs, upset a bottle of phosphorus and hurled it violently to the floor, setting fire to the car. In a moment all was in a state of confusion.

It was not difficult to extinguish the flames, but the conductor, who had long been displeased with the horrid smells and terrifying noises which proceeded from

Edison's car, thought it a good opportunity for turning him out of the train. In a very short time indeed the poor lad was deposited on the platform, with his type, chemicals, and other property thrown after him. The worst of it was, that the brutal conductor, in his rage, gave him, before he descended, such a severe box on the ear, that the delicate organ of hearing was injured for life by the act: though the finest surgical skill was afterwards employed, it was of no avail.

Left alone and desolate amongst the fragments of his poor belongings, ill dressed and ill fed, poor young Edison stood looking after his beloved laboratory and workshop disappearing in the distance. He felt stunned and miserably disappointed. Was this the end of his joyous labors and successful experiments?

Young Edison had too brave a heart to be crushed by his misfortunes, heavy and unmerited as they were; so, presently, picking up what remained to him of his property, he set off towards his home.

He had not lost his place as newsboy, but only the privilege of using the old luggage-car as his laboratory or workshop; and he valued that very much. However, on his arrival at home, his good mother consoled him immensely, by allowing him the use of the basement, or cellar kitchen, belonging to the house, which he forthwith proceeded to fill with all kinds of rubbish.

Mrs. Edison had great faith in her son, and when a neighbor expostulated with her upon allowing him to bring so much rubbish home with him, she calmly replied, "The world will hear of him yet." Her faith in him has been splendidly justified by subsequent events.

And now the boy's mind, released from its editorial duties, turned with more longing than ever to the desire of mastering the wonderful art of telegraphy. Besides buying and reading a good work on electricity, in the cellar in which he now worked he began to make experiments, together with his friend James Ward.

The two boys actually set up a line between their homes, made of an ordinary stove-pipe wire, insulated with bottles, and crossed under a busy street by means of an old cable fished up from the bed of a river. A piece of spring brass furnished the key, and the magnets were wound with wire wrapped in old rags.

The Edison Lamp.

But what were the boys to do for a current? Their first attempt to make one was by means of a couple of big cats. Attaching a wire to their legs, they rubbed them vigorously at each end of the line. This device, however, proved to be a failure; the cats, as Edison's biographers remark, refused to lend themselves to the pursuits of science, and the test resulted in their running away. But, we are told, "the experiment was not without success; a tremendous local current and perfect electric arc were produced, but it would not work the line, and was abandoned."

Undaunted by failures, however, Edison continued making his experiments, and bringing home to his cellar everything which he fancied might be useful for them. Of money to buy necessary chemicals he had little, but, by denying himself everything but the barest necessaries of life, he found means to buy a number of old

instruments and other materials. In his working hours he still went on with his former employment of newspaper-selling on the Port Huron train, running from Port Huron to Detroit, and returning daily, except on Sundays. He was still successful with his newspapers, and made a point of leaving at least one dollar of his day's earnings with his parents before setting off again in the morning.

He was a kind-hearted lad, ever ready to help another, and by this time he had many friends amongst the station-agents, operators, and their families all along the line. At Mount Clemens station, where his train usually stayed about thirty minutes, as it did the freight-work and shunted there, he knew several people very well. The station-master, Mr. J. U. Mackenzie, had a nice little boy of about two years and a half old, called Jemmy, and, in the intervals of selling his papers, young Edison would play with the child.

One lovely summer morning, in the year 1862, about half-past ten, an occurrence took place which was of much importance to the ambitious and hard-working newspaper-boy. His train had arrived at Mount Clemens. Letting its passenger and luggage car stand on the north end of the station platform, the pin having been pulled between the luggage and first box car, the train of some twelve or fifteen luggage-cars went forward, and then backing in upon the freight-house siding, took out a box car (containing ten tons of material), and pushed it so that its momentum would enable it to reach the luggage-car without any brakesman controlling it.

It happened that, exactly at that moment, Edison,

who had been standing watching the fowls in the station-master's poultry yard, turned round and perceived, to his horror, that little Jemmy Mackenzie was on the main line. The little fellow was playing in the sunshine, and throwing pebbles over his head, quite ignorant of the awful danger he was in from the rapidly approaching car.

Dashing his newspapers to the ground, together with his cap, Edison quickly sprang forward to rescue his little friend, at the risk of his own life.

"Edison Quickly Sprang Forward."

On came the car, but Edison was just able to throw himself and the child out of its way. They fell together, face downwards, and with such force as to drive the particles of gravel into their flesh, but happily just out of reach of the car as it came up. An eye-witness declared that, if Edison had been a second later, he would have lost a foot or have been killed. Indeed the car struck the heel of his boot. The station-master was in his ticket-office; but, on hearing a shriek, he came out of it in time to see the railway-men carrying the two boys to the platform.

Ah, how grateful the poor father was! He was a poor man, living, as so many railway employees do, above his means, and usually spending his salary before he received it from his paymaster. He had no money

to offer the brave rescuer of his little boy, but quickly thought of a way of proving his gratitude.

He could teach the poor newspaper-lad the art of telegraphy, and put him in the way of earning a good salary as a telegraph operator. Much to Edison's delight — for this was just the kind of help that he wanted — he at once proposed to do so.

Edison gratefully accepted the welcome offer. Ah, how hard he worked now! After plying his business all day, each night, on coming home to Port Huron, he returned on the luggage train to Mount Clemens to learn his new work.

For about ten days this arrangement was carried on very satisfactorily; then Edison did not turn up at Mount Clemens for his telegraph lessons for several days. When he did come, however, he brought with him a complete set of working telegraph instruments, so small that they would not cover an ordinary envelope in size. They were perfect in their way, and had all been made by the boy with his own hands, in the gun-shop of Messrs. Fisher and Long in Detroit.

Mrs. Mackenzie's brother, Rowland Benner, was also learning telegraphy at the same time, and he and Edison vied with each other in their efforts to excel.

Benner assisted Edison with his first speculation. This was nothing less than to try and work a little private telegraph line between the station and the town. The boys made their telegraph office in a drug-store in the town, using the instruments Edison had made, upon a line made of annealed stove-pipe wire, upon the stakes of a rail fence, insulated with common nails.

In dry weather this line worked well enough, but on damp, wet days there was no tick to be heard. The young partners fixed a tariff of twelve and a half cents, and, during the first months, they took in the munificent sum of thirty-seven and a half cents, after which they found it necessary to close the works, as Edison was then about to take more remunerative work.

Others besides the station-master at Mount Clemens assisted Edison in his telegraphic education, and in three months he understood the art of telegraphy quite well. He used to frequent the Western Union Telegraphic Office in Port Huron, where he learned much; and it was then that he duplexed the workings on the Grand Trunk Cable between Port Huron and Sarnia. This was considered a very wonderful feat, and was a great convenience to the Grand Trunk Railroad, as it made their business much easier to work. It is not known, however, whether Edison was ever paid for doing this.

The winter having been exceedingly severe, the masses of ice had formed to such an extent and with such force as to sever the cable between Port Huron and the city of Sarnia. The river, which was a mile and a half wide at that point, was totally impassable, and all telegraphic communications were prevented. But Edison was not to be daunted by such difficulties. His inventive mind soon thought of a remedy. He would make short and long sounds express the dots and dashes of telegraphy, and jumping on a locomotive, he made the whistle sound the message.

"Halloo, Sarnia!" he said in this way, "Sarnia, do you hear what I say?"

At first there was no response from the Sarnian operator.

Again and again the short and long toots shaped themselves into the dots and dashes of telegraphy.

The spectators on the bank watched with immense excitement. And at length the answer came. It was perfectly intelligible, and the connection between the two towns was once more open.

Now young Edison began to be talked about, and his wonderful abilities were recognized, so that he found no difficulty in obtaining employment.

. . . . . .

When Edison came to New York he was painfully poor, for, besides his empty pockets, he was loaded with a debt amounting to two or three hundred dollars.

For three weeks the young man had a hard time of it. Hunger, rough lodgings, and discouraging interviews with the heads of telegraph departments, were most depressing. But there is an old saying that the darkest hour is just before the dawn, and when things are at their lowest ebb they often begin to rise; and so it was with Edison. Plunged into poverty and the contempt of man in a strange place, after all his brilliant achievements and his long toil of night and day, his soul was sinking within him, and his physical endurance was beginning to wane, when one day he found himself on the steps of the Laws Gold Reporting Company's Office, Wall Street. A crowd was surging about the place, and elbowing its way inside the door, desperation in some countenances, trouble in all. Amidst the confusion, Edison passed into the office

unnoticed, and, standing by, observed with keen eyes exactly what was wrong, and also how to remedy it.

The office was the centre of no fewer than six hundred brokers' offices, with each of which it was connected by a system of indicators. It was, in fact, in a way, the great heart of wide-spread commercial activity. And just then Wall Street was in a state of immense excitement about a singular financial crisis. A panic threatened in the gold market; whole families were on the verge of ruin; fortunes trembled in the balance. Inflamed, unmanned by the lust of gold, men crowded round the centre whence news could be obtained, with cruel shouts of triumph or senile bursts of tears; and just at the time of all that wretched excitement, when the eyes of thousands were turned with frantic eagerness to see what statistics would be furnished by the hundreds of indicators, there in the Laws Gold Reporting Company's chief office, the stock-quotation printer, working by means of electricity, had suddenly collapsed, whilst with it was lost every subordinate source of information. Mr. Laws was a very nervous man; his superintendent, Mr. Frank Pope, resembled him in that respect; they were therefore almost driven off their mental balance by this dire misfortune. Six hundred brokers' boys, weighted with indignant messages from their chiefs, and a crowd of angry, excited people surging to and fro without, and even within their office, drove them almost to desperation. What could they do?

"I think, Mr. Laws," remarked Edison quietly, after having calmly examined the broken-down printer, "I can show you where the trouble lies. There is a con-

tact spring which has broken and fallen between two cog-wheels, which prevents the gear from moving."

It was indeed so. With gratitude Mr. Laws looked at the shabbily dressed stranger, whose cleverness had saved him from his most disastrous position. The obstruction was quickly removed from the quotation printer, and that important centre was again in touch with all its dependent organs.

Soon Edison found himself a hero gazed upon by hundreds of admiring eyes. And the end of it was that, the very next day, Mr. Laws gladly engaged him to take charge in future of all the machinery, and see that it ran successfully. His salary was fixed at three hundred dollars a month, which was very nearly three times as much as he had ever received before. . . . And now, under more advantageous circumstances, he invented some stock printers and private family telegraph appliances, with which the Consolidated company was so pleased that it sent a committee to wait upon him, for the purpose of securing these inventions for itself.

Edison had made up his mind that the sum that the company ought to pay him should be about five thousand dollars. But, wanting money badly as he did for further experiments, he was privately resolved to accept anything.

"How much do you want for your devices?" asked one of the members of the committee.

"Make me an offer," replied Edison cautiously.

"Well," said the other, "how would forty thousand dollars strike you?"

Edison was so "struck" that, in his own words, he

"could have been knocked down with the traditional feather," so astonished was he at the sum.

Of course he at once accepted it, but later began to fear that the offer was not genuine, and that he had been made the victim of a Wall Street trick. Two days afterwards, however, a large, formidable-looking contract was brought him to sign, and, after he had done so, a check on the William and Wall Street Bank was handed to him.

Strangely enough, Edison had never been in a bank before, so, when he went to get his check cashed, he was not at all certain what to do. He stood still, therefore, a little while, to see, as he says, "the mode of procedure," and then proceeded to take his place, in turn with others, at the paying clerk's window.

When his turn came, and he presented his check, the cashier said something to him which he did not hear, and then proceeded to shout to him; but, owing to his deafness, Edison was unable to understand what he wanted. Again the clerk shouted, but in vain.

Edison turned away, and, sitting down dismally on the steps of the bank, concluded that he would never get that forty thousand dollars. Indeed, he became so hopeless that, he said afterwards, any one might have bought that check of him for fifty dollars.

At last, however, he went back to the company's office, and told one of the clerks how he had failed to get the check cashed. Then it was explained to him that the cashier only wanted to know who he was, before paying over to him such a large sum. Returning to the bank with Edison, the company's clerk in-

troduced him there, and the money was at once paid over. . . .

Edison's magnificent northern home is Glenmont, in New Jersey. It consists of an extensive and superbly appointed house, which, built of brick, stone, and wood, abounds in gabled roofs, picturesque nooks and angles, carved balconies, and richly hued stained-glass windows. Beautiful grounds, fitted up with rare shrubs and much that can delight the eye, surround this spacious building.

There, with all that wealth can buy to make life enjoyable, it is pleasant to think of this hard-working man, who began his career under such great disadvantages as a poor newspaper boy, and worked his way up the ladder of fame as bravely and steadily as any man on earth, resting sometimes, and enjoying the happiness of his dear ones, as he lavishly bestows upon them the treasures won by almost superhuman efforts.

At beautiful Glenmont, on the occasion of a juvenile party being given in honor of Edison's daughter Madeline, the great electrician gave a brilliant display of his electric light.

Many incandescent bulbs stained in a variety of exquisite colors were hidden amongst the crystal fringes and stalactites of the great chandeliers, and so connected with the sources of electrical supply as to throw out divers sheets of ruby, sapphire, amethyst, and gold, in a manner like the illumination of St. Peter's at Rome. In the life-cake, a brilliantly sparkling structure of fairy towers and chatelaines, foliage and frosted bloom, a single electric bulb was placed, which glowed like a sea of light in a setting of minor gems

made of a fringe of tiny incandescent lamps not much larger than drops of dew. . . .

Mr. Edwards tells us that when Edison was congratulated upon attaining his forty-sixth birthday, he said that he did not measure his life by years, but by achievements or by campaigns, and that he looked forward to no period of rest, believing that, for him at least, the happiest life is a life of work.

And in speaking of his campaigns, he remarked: "I do not regard myself as a pure scientist, as so many persons have insisted that I am. I do not search for the laws of nature, and have made no great discoveries of such laws. I do not study science as Newton and Kepler and Faraday and Henry studied it, simply for the purpose of learning truth. I am only a professional inventor. My studies and experiments have been conducted entirely with the object of inventing that which will have commercial utility. I suppose I might be called a scientific inventor, as distinguished from a mechanical inventor, although really there is no distinction."

Transmitting Cornet Solo to Phonograph.

Speaking of the campaigns and achievements by which he measured his life, the great electrician mentioned first the stock-ticker and the telephone, upon the latter of which he had worked very hard, but said he looked upon the phonograph as the greatest of his

achievements in the early part of his career. "That," he said, "was an invention pure and simple. No suggestion of it, so far as I know, had ever been made; and it was a discovery made by accident, while experimenting upon another invention, that led to the development of the phonograph." Then he went on to say that the second campaign was the invention of his incandescent lamp, which, as we have seen, was the first lamp of the kind which became commercially valuable. He worked about three years upon that, he said, and some of his experiments were very delicate and very costly. That, he estimated, had been so far his chief achievement, as it certainly was the first one which made him independent and left him free to begin other campaigns without the necessity of calling in outside capital, or of finding his invention subject to the manipulations of Wall Street. "I am now fortunate enough," he continued, "to have capital of my own, and that I shall use in these campaigns" (his campaigns in the future).

People who are not Christians are fond of asserting that the scientific mind is opposed to belief in God. But Edison is a direct refutation of this.

One day, when he was talking to Mr. Lathrop, he said, "I do not believe that matter is inert, acted upon by an outside force. To me it seems that every atom is possessed by a certain amount of primitive intelligence. Look at the thousand ways in which atoms of hydrogen combine with those of other elements, forming the most diverse substances. Do you mean to say that they do this without intelligence? Atoms in harmonious and useful relation assume beautiful or in-

teresting shapes and colors, or give forth a pleasant perfume, as if expressing their satisfaction."

"But where does this intelligence come from?" he was asked.

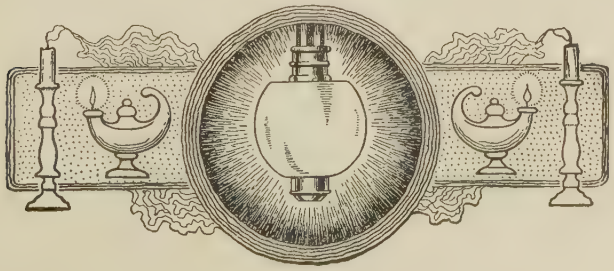
The answer was ready: "From some power greater than ourselves."

Then the other asked, "Do you believe, then, in an intelligent Creator, a personal God?"

"Certainly," replied Edison; "the existence of such a God can, to my mind, almost be proved from chemistry."

Mr. Edwards reports also that he said to him, "I tell you that no person can be brought into close contact with the mysteries of nature, or make a study of chemistry, without being convinced that behind it all there is supreme intelligence. I am convinced of that; and I think that I could, perhaps I may some time, demonstrate, the existence of such intelligence through the operation of those mysterious laws with the certainty of a demonstration in mathematics."

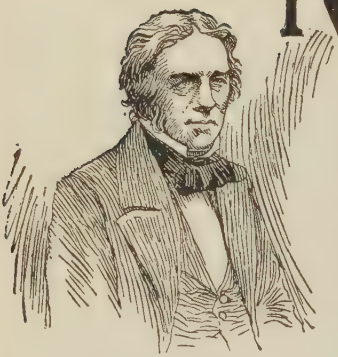
It is a fitting thing that he to whom the Almighty has vouchsafed such great gifts of power and knowledge, gifts which bear fruit oftentimes so like the ancient miracles, should thus bear witness to the One greater than himself, who alone creates and disposes of every creature, animate or inanimate, in his whole world.



MICHAEL FARADAY

(From Faraday as a Discoverer.)

By JOHN TYNDALL.



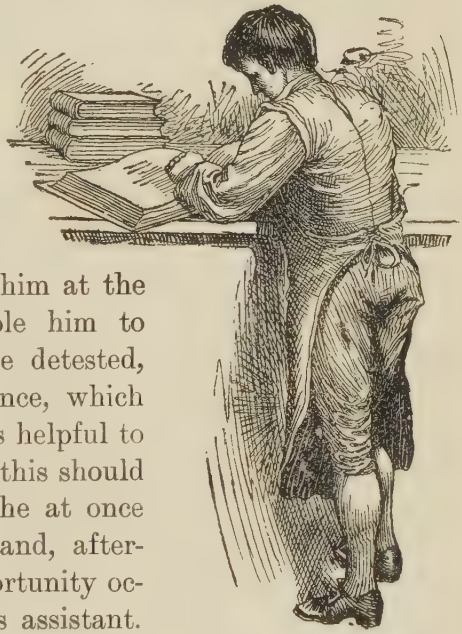
Michael Faraday.

MICHAEL FARADAY was born at Newington Butts, on Sept. 22, 1791, and he died at Hampton Court, on Aug. 25, 1867. Believing, as I do, in the general truth of the doctrine of hereditary transmission — sharing the opinion of Carlyle, that "a really able man never proceeded from entirely stupid parents" — I once used the privilege of my intimacy with Mr. Faraday to ask him whether his parents showed any signs of unusual ability. He could remember none. His father, I believe, was a great sufferer during the latter years of his life, and this might have masked whatever intellectual power he possessed.

When thirteen years old, that is to say in 1804, Faraday was apprenticed to a bookseller and bookbinder in Blandford Street, Manchester Square; here he

spent eight years of his life, after which he worked as a journeyman elsewhere.

You have heard the account of Faraday's first contact with the Royal Institution; that he was introduced by one of the members to Sir Humphry Davy's last lectures; that he took notes of those lectures, wrote them fairly out, and sent them to Davy, entreating him at the same time to enable him to quit trade, which he detested, and to pursue science, which he loved. Davy was helpful to the young man, and this should never be forgotten: he at once wrote to Faraday, and, afterwards when an opportunity occurred, made him his assistant. From a letter written by Faraday himself soon after his appointment as Davy's assistant, I extract the following account of his introduction to the Royal Institution: —



"Faraday was Apprenticed to a Bookseller."

London, Sept. 13, 1813.

"I was formerly a bookseller and binder, but am now turned philosopher, which happened thus: Whilst an apprentice, I, for amusement, learnt a little chemistry and other parts of philosophy, and felt an eager desire to proceed in that way further. After being a journeyman for six months, under a

disagreeable master, I gave up my business, and through the interest of Sir H. Davy, filled the situation of chemical assistant to the Royal Institution of Great Britain, in which office I now remain; and where I am constantly employed in observing the works of nature, and tracing the manner in which she directs the order and arrangement of the world."

This account is supplemented by the following letter, written by Faraday to his friend De la Rive, on the occasion of the death of Mrs. Marcet. The letter is dated Sept. 2, 1858: —

"My dear Friend, — Your subject interested me deeply every way; for Mrs. Marcet was a good friend to me, as she must have been to many of the human race. I entered the shop of a bookseller and bookbinder at the age of thirteen, in the year 1804, remained there eight years, and during the chief part of the time bound books. Now it was in those books, in the hours after work, that I found the beginning of my philosophy. There were two that especially helped me, the 'Encyclopædia Britannica,' from which I gained my first notions of electricity, and Mrs. Marcet's 'Conversations on Chemistry,' which gave me my foundation in that science . . . . Do not suppose that I was a very deep thinker, or was marked as a precocious person. I was a very lively, imaginative person, and could believe in the 'Arabian Nights' as easily as in the 'Encyclopædia.' But facts were important to me, and saved me. I could trust a fact, and always cross-examined an assertion. So when I questioned Mrs. Marcet's book by such little experiments as I could find means to perform, and found it true to the facts as I could understand them, I felt that I had got hold of an anchor in chemical knowledge, and clung fast to it. Thence my deep veneration for Mrs. Marcet — first as one who had conferred great personal good and pleasure on me; and then as one able to convey the truth and principle of those boundless fields of knowledge which concern natural things, to the young, untaught, and inquiring mind."

Twelve or thirteen years ago Mr. Faraday and myself quitted the Institution one evening together, to pay a visit in Baker Street. He took my arm at the door, and pressing it to his side in his warm, genial way, said, —

"Come, Tyndall, I will now show you something that will interest you."

We walked northwards, passed the house of Mr. Babbage, which drew forth a reference to the famous evening parties once assembled there. We reached Blandford Street, and after looking about, he paused before a stationer's shop, and then went in. On entering the shop, his usual animation seemed doubled; he looked rapidly at everything it contained. To the left on entering was a door, through which he looked down into a little room, with a window in front facing Blandford Street. Drawing me towards him, he said eagerly: —

"Look there, Tyndall, that was my working place. I bound books in that little nook."

A respectable-looking woman stood behind the counter: his conversation with me was too low to be heard by her, and he now turned to the counter to buy some cards as an excuse for our being there. He asked the woman her name — her predecessor's name — his predecessor's name.

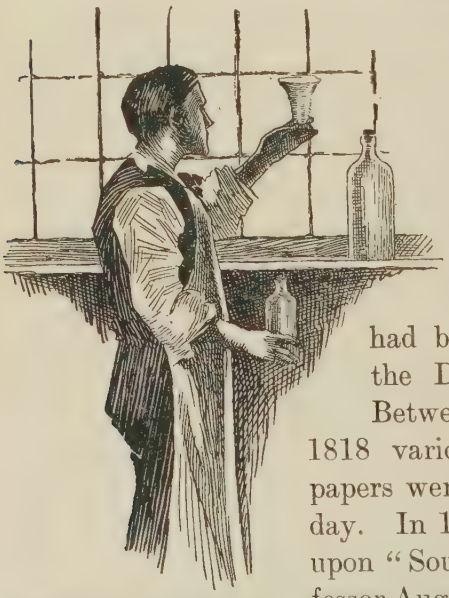
"That won't do," he said, with good-humored impatience; "who was *his* predecessor?"

"Mr. Riebau," she replied, and immediately added, as if suddenly recollecting herself, "He, sir, was the master of Sir Charles Faraday."

"Nonsense!" he responded, "there is no such person."

Great was her delight when I told her the name of her visitor; but she assured me that as soon as she saw him running about the shop, she felt — though she did not know why — that it must be "Sir Charles Faraday."

Faraday, as you know, accompanied Davy to Rome: he was re-engaged by the managers of the Royal Institution on May 15, 1815. Here he made rapid progress in chemistry, and after a time was entrusted with easy analyses by Davy. In those days the Royal Institution published *The Quarterly Journal of Science*, the precursor of our own "Proceedings." Faraday's first contribution to science appeared in that journal in 1816. It was an analysis of some caustic lime from Tuscany, which had been sent to Davy by the Duchess of Montrose. Between this period and 1818 various notes and short papers were published by Faraday. In 1818 he experimented upon "Sounding Flames." Professor Auguste De la Rive, father of our present excellent De la Rive, had investigated these sounding flames, and had applied to them an explanation which completely accounted for a class of sounds discovered by De la



Faraday at Work in His Laboratory.

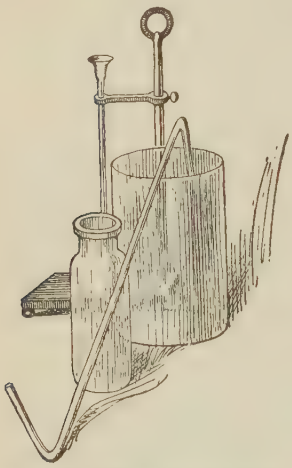
Rive himself. By a few simple and conclusive experiments, Faraday proved that the explanation was insufficient. It is an epoch in the life of a young man, when he finds himself correcting a person of eminence, and in Faraday's case, where its effect was to develop a modest self-trust, such an event could not fail to act profitably.

From time to time between 1818 and 1820 Faraday published scientific notes and notices of minor weight. At this time he was acquiring, not producing; working hard for his master, and storing and strengthening his own mind. He assisted Mr. Brande in his lectures, and so quietly, skilfully, and modestly was his work done, that Mr. Brande's vocation at the time was pronounced "lecturing on velvet." In 1820 Faraday published a chemical paper "on two new compounds of chlorin and carbon, and on a new compound of iodin, carbon, and hydrogen. "This paper was read before the Royal Society on Dec. 21, 1820, and it was the first of his that was honored with a place in the "Philosophical Transactions."

On June 12, 1821, he married, and obtained leave to bring his young wife into his rooms at the Royal Institution. There for forty-six years they lived together, occupying the suite of apartments which had been previously in the successive occupancy of Young, Davy and Brande. . . .

When from an Alpine height the eye of the climber ranges over the mountains, he finds that for the most part they resolve themselves into distinct groups, each consisting of a dominant mass surrounded by peaks of lesser elevation. The power which lifted the mightier

eminences, in nearly all cases lifted others to an almost equal height. And so it is with the discoveries of Faraday. As a general rule, the dominant result does not stand alone, but forms the culminating point of a vast and varied mass of inquiry. In this way, round about his great discovery of magneto-electric induction, other weighty labors group themselves. His investigations on the extra current; on the polar and other conditions of diamagnetic bodies; on lines of magnetic force, their definite character and distribution; on the employment of the induced magneto-electric current as a measure and test of magnetic action; on the revulsive phenomena of the magnetic field, are all, notwithstanding the diversity of title, researches in the domain of magneto-electric induction.



Laboratory Instruments.

Faraday's second group of researches and discoveries embrace the chemical phenomena of the current. The dominant result here is the great law of definite electro-chemical decomposition, around which are massed various researches on electro-chemical conduction, and on electrolysis both with the machine and with the pile. To this group also belong his analysis of the contact theory, his inquiries as to the source of voltaic electricity, and his final development of the chemical theory of the pile.

His third great discovery is the magnetization of

light, which I should liken to the Weisshorn among mountains — high, beautiful, and alone.

The dominant result of his fourth group of researches is the discovery of diamagnetism, announced in his memoir as the magnetic condition of all matter, round which are grouped his inquiries on the magnetism of flame and gases; on magnecrystallic action, and on atmospheric magnetism, in its relation to the annual and diurnal variation of the needle, the full significance of which is still to be shown.

These are Faraday's most massive discoveries, and upon them his fame must mainly rest. But even without them, sufficient would remain to secure for him a high and lasting scientific reputation. We should still have his researches on the liquefaction of gases; on frictional electricity; on the electricity of the gymnotus; on the source of power in the hydro-electric machine, the two last investigations being untouched in the foregoing memoir; on electro-magnetic rotations; on regelation; all his more purely chemical researches, including his discovery of benzol. Besides these he published a multitude of minor papers, most of which, in some way or other, illustrates his genius. I have made no allusion to his power and sweetness as a lecturer.

Taking him for all in all, I think it will be conceded that Michael Faraday was the greatest experimental philosopher the world has ever seen; and I will add the opinion, that the progress of future research will tend, not to dim or diminish, but to enhance and glorify the labors of this mighty investigator. . . .

Faraday's immediate forefathers lived in a little

place called Clapham Wood Hall, in Yorkshire. Here dwelt Robert Faraday and Elizabeth his wife, who had ten children, one of them, James Faraday, born in 1761, being father to the philosopher. A family tradition exists that the Faradays came originally from Ireland. Faraday himself has more than once expressed to me his belief that his blood was in part Celtic, but how much of it was so, or when the infusion took place, he was unable to say. He could imitate the Irish brogue, and his wonderful vivacity may have been in part due to his extraction.

But there were other qualities which we should hardly think of deriving from Ireland. The most prominent of these was his sense of order, which ran like a luminous beam through all the transactions of his life. The most entangled and complicated matters fell into harmony in his hands. His mode of keeping accounts excited the admiration of the managing board of this Institution. And his science was similarly ordered. In his experimental researches, he numbered every paragraph, and welded their various parts together by incessant reference. His private notes of the "Experimental Researches," which are happily preserved, are similarly numbered: their last paragraph bears the figure 16,041.

His working qualities, moreover, showed the tenacity of the Teuton. His nature was impulsive, but there was a force behind the impulse which did not permit it to retreat. If in his warm moments he formed a resolution, in his cool ones he made that resolution good. Thus his fire was that of a solid combustible, not that of a gas, which blazes suddenly, and dies as suddenly away. . . .

While once conversing with Faraday on science, in its relations to commerce and litigation, he said to me that, at a certain period of his career, he was forced definitely to ask himself, and finally to decide, whether he should make wealth or science the pursuit of his life. He could not serve both masters, and he was therefore compelled to choose between them. After the discovery of magneto-electricity his fame was so noised abroad that the commercial world would hardly have considered any remuneration too high for the aid of abilities like his. Even before he became so famous, he had done a little "professional business." This was the phrase he applied to his purely commercial work. His friend, Richard Phillips, for example, had induced him to undertake a number of analyses, which produced, in the year 1830, an addition to his income of more than a thousand pounds; and in 1831, a still greater addition. He had only to will it, to raise, in 1832, his professional business income to £5,000 a year. Indeed, this is a wholly insufficient estimate of what he might, with ease, have realized annually during the last thirty years of his life.

While studying the "Experimental Researches" with reference to the present memoir, the conversation with Faraday here alluded to came to my recollection, and I sought to ascertain the period when the question, "wealth or science," had presented itself with such emphasis to his mind. I fixed upon the year 1831 or 1832, for it seemed beyond the range of human power to pursue science as he had done during the subsequent years, and to pursue commercial work at the same time. To test this conclusion I asked permission to

see his accounts, and on my own responsibility, I will state the result. In 1832, his professional business income, instead of rising to £5,000, or more, fell from £1,090.4*s.* to £155.9*s.* From this it fell with slight oscillations to £92 in 1837, and to zero in 1838. Between 1839 and 1845, it never, except in one instance, exceeded £22; being for the most part much under this. The exceptional year referred to was that in which he and Sir Charles Lyell were engaged by the government to write a report on the Haswell Colliery explosion, and then his business income rose to £112. From the end of 1845 to the day of his death, Faraday's annual professional business income was exactly zero. Taking the duration of his life into account, this son of a blacksmith and apprentice to a bookbinder had to decide between a fortune of £150,000 on the one side, and his undowered science on the other. He chose the latter, and died a poor man. But his was the glory of holding aloft among the nations the scientific name of England for a period of forty years.

JOHN FLAXMAN

(From Self Help.)

By SAMUEL SMILES.

JOHN FLAXMAN was a true genius — one of the greatest artists England has yet produced. He was besides a person of beautiful character, his life furnishing many salutary lessons for men of all ranks. Flaxman was the son of a humble seller of plaster casts in New Street, Covent Garden; and when a child, he was so constant an invalid that it was his custom to sit behind the shop counter propped by pillows, amusing himself with drawing and reading.

A benevolent clergyman, named Matthews, one day calling at the shop, found the boy trying to read a book, and on inquiring what it was, found it was a Cornelius Nepos, which his father had picked up for a few pence at a bookstall. The gentleman, after some conversation with the boy, said that was not the proper book for him to read, but that he

would bring him a right one on the morrow; and the kind man was as good as his word. The Rev. Mr. Matthews used afterwards to say, that from that casual interview with the cripple little invalid behind the plaster-cast seller's shop counter, began an acquaintance which ripened into one of the best friendships of his life.

He brought several books to the boy, amongst which were Homer and "Don Quixote," in both of which Flaxman then and ever after took immense delight. His mind was soon full of the heroism which breathed through the pages of the former work, and, with the stucco Ajaxes and Achilleses about him, looming along the shop shelves, the ambition thus early took possession of him, that he too would design and embody in poetic forms those majestic heroes. His black chalk was at once in his hand, and the enthusiastic boy labored in a divine despair to body forth in visible shapes the actions of the Greeks and Trojans.

Like all youthful efforts, his first designs were crude. The proud father one day showed them to Roubiliac, the sculptor, who turned from them with a contemptuous "pshaw!" But the boy had the right stuff in him; he had industry and patience; and he continued to labor incessantly at his books and drawings. He then tried his young powers in modelling figures in plaster of Paris, wax, and clay; some of these early works are still preserved, not because of their merit, but because they are curious as the first healthy efforts of patient genius.

The boy was long before he could walk, and he only learned to do so by hobbling along upon crutches. Hence he could not accompany his father to see the procession at the coronation of George III., but he entreated his father to bring him back one of the coronation medals which were to be distributed amongst the crowd. His practice at this time was to make impressions on all seals and medals that pleased him; and it was for this that he so much coveted the medal.

Hobbling along upon Crutches.

His physical health improving, the little Flaxman then threw away his crutches. The kind Mr. Matthews invited him to his house, where his wife explained Homer and Milton to the boy. They helped him also in his self-culture, — giving him lessons in Greek and Latin, the study of which he prosecuted at home. When under Mrs. Matthews, he also attempted with his bit of charcoal to embody in outline on paper such passages as struck his fancy.

His drawings could not, however, have been very extraordinary, for when he showed a drawing of an eye which he had made to Mortimer, the artist, that gentleman with affected surprise exclaimed, "Is it an oyster?"

The sensitive boy was much hurt, and for a time took care to avoid showing his drawings to artists, who, though a thin-skinned race, are sometimes disposed to

be very savage in their criticisms on others. At length, by dint of perseverance and study, his drawing improved so much that Mrs. Matthews obtained a commission for him from a lady, to draw six original drawings in black chalk of subjects in Homer. His first commission! A great event that in the boy's life. A surgeon's first fee, a lawyer's first retainer, a legislator's first speech, a singer's first appearance behind the foot-lights, an author's first book, are not any of them more full of interest to the individual than the artist's first commission. The boy duly executed the order, and was both well praised and well paid for his work.

At fifteen Flaxman entered as a student at the Royal Academy. He might then be seen principally in the company of Blake and Stothard, young men of kindred tastes and genius, gentle and amiable, yet ardent in their love of art. Notwithstanding his retiring disposition, Flaxman soon became known among the students, and great things were expected of him. Nor were their expectations disappointed: in his fifteenth year he gained the silver prize, and next year he became a candidate for the gold one. Everybody prophesied that he would carry off the medal, for there was none who surpassed him in ability and industry. The youth did his best, and in his after-life honestly affirmed that he deserved the prize, but he lost it, and the gold medal was adjudged to Engleheart, who was not afterwards heard of. This failure on the part of the youth was really of service to him; for defeats do not long cast down the resolute-hearted, but only serve to call forth their real powers.

"Give me time," said he to his father, "and I will

yet produce works that the Academy will be proud to recognize."

He redoubled his efforts, spared no pains, designed and modelled incessantly, and consequently made steady if not rapid progress. But meanwhile poverty threatened his father's household; the plaster-cast trade yielded a very bare living; and young Flaxman, with resolute self-denial, curtailed his hours of study, and devoted himself to helping his father in the humble details of his business. He laid aside his Homer to take up the plaster-trowel. He was willing to work in the humblest department of the trade so that his father's family might be supported, and the wolf kept from the door. To this drudgery of his art he served a long apprenticeship; but it did him good. It familiarized him with steady work, and cultivated in him the spirit of patience. The discipline may have been rough, but it was wholesome.

Happily, young Flaxman's skill in design had reached the knowledge of Mr. Wedgwood, who sought him out for the purpose of employing him in designing improved patterns of china and earthenware to be produced at his manufactory. It may seem a humble department of art for Flaxman to have labored in; but it really was not so. An artist may be laboring truly in his vocation while designing even so common an article as a teapot or a water-jug; articles which are in daily use amongst the people, and are before their eyes at every meal, may be made the vehicles of art-education to all and minister to their highest culture. The most ambitious artist may thus confer a greater practical benefit on his countrymen than by executing an

elaborate work which he may sell for thousands of pounds, to be placed in some wealthy man's gallery, where it is hidden away from public sight.

Before Wedgwood's time the designs which figured upon our china and stoneware were hideous both in drawing and execution, and he determined to improve both. Finding out Flaxman, he said to him:—

"Well, my lad, I have heard that you are a good draughtsman and clever designer. I'm a manufacturer of pots, — name Wedgwood. Now, I want you to design some models for me, — nothing fantastic, but simple, tasteful, and correct in drawing. I'll pay you well. You don't think the work beneath you?"

"By no means, sir," replied Flaxman; "indeed, the work is quite to my taste. Give me a few days, — call again, and you will see what I can do."

"That's right, — work away. Mind, I am in want of them now. They are for pots of all kinds, — teapots, jugs, teacups and saucers. But especially I want designs for a table-service. Begin with that. I mean to supply one for the royal table. Now, think of that, young man. What you design is meant for the eyes of royalty!"

"I will do my best, sir, I assure you." And the kind gentleman bustled out of the shop as he had come in.

Flaxman did his best. By the time that Mr. Wedgwood next called upon him, he had a numerous series of models prepared for various pieces of earthenware. They consisted chiefly of small groups in very low relief, — the subjects taken from ancient verse and history. Many of them are still in existence, and some

"Amusing Himself with Drawing and Reading."

are equal in beauty and simplicity to his after-designs for marble. The celebrated Etruscan vases, many of which were to be found in public museums and in the cabinets of the curious, furnished him with the best examples of form, and these he embellished with his own elegant devices. "Stuart's Athens," then recently published, also furnished him with specimens of the purest-shaped Greek utensils, and he was not slow to adopt the best of them, and work them up into new and wondrous shapes of elegance and beauty. Flaxman then saw that he was laboring in a great work, — no less than the promotion of popular education; and he was proud in after-life, to allude to these his early labors, by which he was enabled at the same time to cultivate his love of the beautiful, to diffuse a taste for art among the people, and to replenish his own purse, while he promoted the prosperity of his friend and benefactor.

From Portrait of Flaxman by Himself.

Engaged in such labors as these, for several years Flaxman executed but few works of art, and then at rare intervals. He lived a quiet, secluded, and simple life, working during the day, and sketching and reading in the evenings. He was so poor that he had as yet been only able to find plaster of Paris for his works, —

marble was too dear a material for him. He had hitherto executed only one statue in the latter material, and that was a commission.

At length, in the year 1782, when twenty-seven years of age, he quitted his father's roof and rented a small house and studio in Wardour Street, Soho; and what was more, he married, — Ann Denman was the name of his wife; and a cheery, bright-souled, noble woman she was. He believed that in marrying her, he should be able to work with an intenser spirit; for, like him, she had a taste for poetry and art; and besides was an enthusiastic admirer of her husband's genius. Yet when Sir Joshua Reynolds — himself a bachelor — met Flaxman shortly after his marriage, he said to him: —

"So, Flaxman, I am told you are married; if so, sir, I tell you you are ruined for an artist."

Flaxman went straight home, sat down beside his wife, took her hand in his, and said, "Ann, I am ruined for an artist."

"How so, John? How has it happened? and who has done it?"

"It happened," he replied, "in the church, and Ann Denman has done it."

He then told her of Sir Joshua's remark — whose opinion was well known, and had often been expressed, that if students would excel they must bring the whole powers of their minds to bear upon their art, from the moment they rise until they go to bed; and also, that no man could be a *great* artist unless he studied the grand works of Raffaelle, Michael Angelo, and others, at Rome and Florence. "And I," said

Flaxman, drawing up his little figure to its full height, "*I* would be a great artist."

"And a great artist you shall be," said his wife, "and visit Rome, too, if that be really necessary to make you great."

"But how?" asked Flaxman.

"*Work and economize*," rejoined the brave wife. "I will never have it said that Ann Denman ruined John Flaxman for an artist."

And so it was determined by the pair that the journey to Rome was to be made when their means would admit.

"I will go to Rome," said Flaxman, "and show the President that wedlock is for a man's good rather than his harm; and you, Ann, shall accompany me."

Patiently and happily this affectionate couple plodded on during five years in that humble little home in Wardour Street; always with the long journey to Rome before them. It was never lost sight of for a moment, and not a penny was uselessly spent that could be saved towards the necessary expenses. They said no word to any one about their project; solicited no aid from the Academy; but trusted only to their own patient labor and love, to pursue and achieve their object. During this time Flaxman exhibited very few works. He could not afford marble to experiment in original designs; but he obtained frequent commissions for monuments, by the profits of which he maintained himself.

He still worked for the Messrs. Wedgwood, who proved good paymasters; and, on the whole, he was thriving, happy and hopeful. He was not a little re-

spected by his neighbors, and those who knew him greatly estimated his sincerity, his honesty, and his unostentatious piety. His local respectability was even such as to bring local honors and local work upon him; so much so that he was on one occasion selected by the rate-payers to collect the watch-rate for the parish of St. Anne, when he might be seen going about, with an ink-bottle suspended from his buttonhole, collecting the money.

At length Flaxman and his wife, having thriftily accumulated a sufficient store of savings, set out for Rome. Arrived there, he applied himself diligently to study, maintaining himself, like other poor artists, by making copies from the antique. English visitors sought his studio and gave him commissions; and it was then that he composed his beautiful designs, illustrative of Homer, Æschylus, and Dante. The price paid for them was moderate, — only fifteen shillings apiece; but Flaxman worked for art as well as money; and the beauty of the designs brought him new friends and patrons. He executed Cupid and Aurora for the munificent Thomas Hope, and the Fury Athamas for the Earl of Bristol. He then prepared to return to England, his taste improved and cultivated by careful study; but before he left Italy, the Academies of Florence and Carrara recognized his merit by electing him a member.

His fame had preceded him to England, and he soon found abundant lucrative employment. While at Rome, he had been commissioned to execute his famous monument in memory of Lord Mansfield, and it was erected in the north transept of Westminster

Abbey shortly after his return. It stands there in majestic grandeur, a monument to the genius of Flaxman himself, — calm, simple, and severe. No wonder that Banks, the sculptor, then in the heyday of his fame, exclaimed when he saw it, "This little man cuts us all out!"

When the bigwigs of the Royal Academy heard of Flaxman's return, and especially when they had an opportunity of seeing and admiring his noble portrait-

Penelope and the Suitors, by Flaxman.

statue of Mansfield, they were eager to have him enrolled among their number. The Royal Academy has always had the art of *running to the help of the strong;* and when an artist has proved that he can achieve a reputation without the Academy, then is the Academy most willing to "patronize" him. He allowed his name to be proposed in the candidates' list of associates, and was immediately elected. His progress was now rapid, and he was constantly employed. Perseverance and study, which had matured his genius,

had made him great, and he went on from triumph to triumph.

But he appeared in yet a new character. The little boy who had begun his studies behind the poor plaster-cast seller's shop-counter in New Street, Covent Garden, was now a man of high intellect and recognized supremacy in art, to instruct aspiring students, in the character of Professor of Sculpture to the Royal Academy! And no man better deserved to fill that distinguished office; for none is so able to instruct others as he who, for himself and by his own almost unaided efforts, has learned to grapple with and overcome difficulties. The caustic Fuseli used to talk of the lectures as "sermons by the Reverend John Flaxman"; for the sculptor was a religious man, which Fuseli was not. But Flaxman acquitted himself well in the professorial chair, as any one who reads his instructive "Lectures on Sculpture," now published, may ascertain for himself.

Flaxman's monuments are known nearly all over England. Their mute poetry beautifies most of our cathedrals, and many of our rural churches. Whatever work of this kind he executed, he threw a soul and meaning into it, embodying some high Christian idea of charity, of love, of resignation, of affection, or of kindness. In monuments such as these his peculiar genius pre-eminently shone. There is a tenderness and grace about them which no other artist has been able to surpass, or even to equal. His rapid sketches illustrative of the Lord's Prayer, published in lithograph some years ago, exhibit this peculiar quality of his genius in a striking light. In historical monuments,

again, he was less successful, though his monuments to Reynolds and Nelson, in St. Paul's Cathedral, are noble works, which will always be admired.

After a long, peaceful and happy life, Flaxman found himself growing old. The loss which he sustained by the death of his affectionate wife Ann was a severe shock to him; but he survived her several years, during which he executed his celebrated "Shield of Achilles" and his noble "Archangel Michael Vanquishing Satan," — perhaps his two greatest works. He died in 1826, in his eighty-second year.

BENJAMIN FRANKLIN

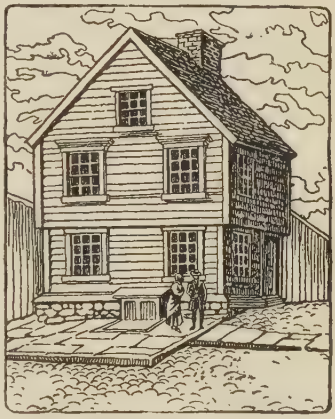
By NATHANIEL HAWTHORNE.

Benjamin Franklin.

IN the year 1716, or about that period, a boy used to be seen in the streets of Boston who was known among his schoolfellows and playmates by the name of Ben Franklin. Ben was born in 1706; so that he was now about ten years old. His father, who had come over from England, was a soap boiler and tallow chandler, and resided in Milk Street, not far from the Old South Church.

Ben was a bright boy at his book, and even a brighter one when at play with his comrades. He had some remarkable qualities which always seemed to give him the lead, whether at sport or in more serious matters. I might tell you a number of amusing anecdotes about him. You are acquainted, I suppose, with his famous story of the whistle, and how he bought it with a whole pocketful of coppers and afterwards repented of his bargain. But Ben had grown a great boy since

those days, and had gained wisdom by experience; for it was one of his peculiarities, that no incident ever happened to him without teaching him some valuable lesson. Thus he generally profited more by his misfortunes than many people do by the most favorable events that could befall them.



Franklin's Birthplace.

Ben's face was already pretty well known to the inhabitants of Boston. The selectmen and other people of note often used to visit his father, for the sake of talking about the affairs of the town or province. Mr. Franklin was considered a person of great wisdom and integrity, and was respected by all who knew him, although he supported his family by the humble trade of boiling soap and making tallow candles.

While his father and the visitors were holding deep consultations about public affairs, little Ben would sit on his stool in a corner, listening with the greatest interest, as if he understood every word. Indeed, his features were so full of intelligence that there could be but little doubt, not only that he understood what was said, but that he could have expressed some very sagacious opinions out of his own mind. But in those days boys were expected to be silent in the presence of their elders. However, Ben Franklin was looked upon as a very promising lad, who would talk and act wisely by and by.

"Neighbor Franklin," his father's friends would sometimes say, "you ought to send this boy to college and make a minister of him."

"I have often thought of it," his father would reply; "and my brother Benjamin promises to give him a great many volumes of manuscript sermons, in case he should be educated for the church. But I have a large family to support, and cannot afford the expense."

In fact, Mr. Franklin found it so difficult to provide bread for his family, that, when the boy was ten years old, it became necessary to take him from school. Ben was then employed in cutting candle wicks into equal lengths and filling the moulds with tallow, and many families in Boston spent their evenings by the light of the candles which he had helped to make. Thus, you see, in his early days, as well as in his manhood, his labors contributed to throw light upon dark matters.

Busy as his life now was, Ben still found time to keep company with his former schoolfellows. He and the other boys were very fond of fishing, and spent many of their leisure hours on the margin of the mill pond, catching flounders, perch, eels, and tomcod, which came up thither with the tide. The place where they fished is now, probably, covered with stone pavements and brick buildings, and thronged with people and with vehicles of all kinds. But at that period it was a marshy spot on the outskirts of the town, where gulls flitted and screamed overhead, and salt meadow grass grew under foot.

On the edge of the water there was a deep bed of clay, in which the boys were forced to stand while

they caught their fish. Here they dabbled in mud and mire like a flock of ducks.

"This is very uncomfortable," said Ben Franklin one day to his comrades, while they were standing mid-leg deep in the quagmire.

"So it is," said the other boys. "What a pity we have no better place to stand!"

If it had not been for Ben, nothing more would have been done or said about the matter. But it was not in his nature to be sensible of an inconvenience without using his best efforts to find a remedy. So as he and his comrades were returning from the water side, Ben suddenly threw down his string of fish with a very determined air.

"Boys," cried he, "I have thought of a scheme which will be greatly for our benefit, and for the public benefit."

It was queer enough, to be sure, to hear this little chap — this rosy-cheeked, ten-year-old boy — talking about schemes for the public benefit! Nevertheless, his companions were ready to listen, being assured that Ben's scheme, whatever it was, would be well worth their attention. They remembered how sagaciously he had conducted all their enterprises ever since he had been old enough to wear smallclothes.

They remembered, too, his wonderful contrivance of sailing across the mill pond by lying flat on his back in the water and allowing himself to be drawn along by a paper kite. If Ben could do that, he might certainly do any thing.

"What is your scheme, Ben? — what is it?" cried they all.

It so happened that they had now come to a spot of ground where a new house was to be built. Scattered round about lay a great many large stones which were to be used for the cellar and foundation. Ben mounted upon the highest of these stones, so that he might speak with the more authority.

"You know, lads," said he, "what a plague it is to be forced to stand in the quagmire yonder — over shoes and stockings (if we wear any) in mud and water. See! I am bedaubed to the knees of my smallclothes; and you are all in the same pickle. Unless we can find some remedy for this evil, our fishing business must be entirely given up. And, surely, this would be a terrible misfortune!"

"That it would! that it would!" said his comrades, sorrowfully.

"Now, I propose," continued Master Benjamin, "that we build a wharf, for the purpose of carrying on our fisheries. You see these stones. The workmen mean to use them for the underpinning of a house; but that would be for only one man's advantage. My plan is to take these same stones and carry them to the edge of the water and build a wharf with them. This will not only enable us to carry on the fishing business with comfort and to better advantage, but it will likewise be a great convenience to boats passing up and down the stream. Thus, instead of one man, fifty, or a hundred, or a thousand, besides ourselves, may be benefited by these stones. What say you, lads? Shall we build the wharf?"

Ben's proposal was received with one of those uproarious shouts wherewith boys usually express their

delight at whatever completely suits their views. Nobody thought of questioning the right and justice of building a wharf with stones that belonged to another person.

"Hurrah! hurrah!" shouted they. "Let's set about it."

It was agreed that they should all be on the spot that evening and commence their grand public enterprise by moonlight. Accordingly, at the appointed time, the whole gang of youthful laborers assembled, and eagerly began to remove the stones. They had not calculated how much toil would be requisite in this important part of their undertaking. The very first stone which they laid hold of proved so heavy that it almost seemed to be fastened to the ground. Nothing but Ben Franklin's cheerful and resolute spirit could have induced them to persevere.

"Began to Remove the Stones."

Ben, as might be expected, was the soul of the enterprise. By his mechanical genius, he contrived methods to lighten the labor of transporting the stones, so that one boy, under his directions, would perform as much as half a dozen if left to themselves. Whenever their spirits flagged he had some joke ready, which seemed to renew their strength, by setting them all into a roar of laughter. And when, after an hour or two of hard work, the stones were transported to the water side, Ben was the engineer to superintend the construction of the wharf.

The boys, like a colony of ants, performed a great deal of labor by their multitude, though the individual strength of each could have accomplished but little. Finally, just as the moon sank below the horizon, the great work was finished.

Window in Franklin House.

"Now, boys," cried Ben, "let's give three cheers and go home to bed. To-morrow we may catch fish at our ease."

"Hurrah! hurrah! hurrah!" shouted his comrades.

Then they all went home in such an ecstasy of delight that they could hardly get a wink of sleep.

In the morning, when the early sunbeams were gleaming on the steeples and roofs of the town and gilding the water that surrounded it, the masons came, rubbing their eyes, to begin their work at the foundation of the new house. But, on reaching the spot, they rubbed their eyes so much the harder. What had become of their heap of stones?

"Why, Sam," said one, in great perplexity, "here's been some witchcraft at work while we were asleep. The stones must have flown away through the air!"

"More likely they have been stolen!" answered Sam.

"But who on earth would think of stealing a heap of stones?" cried a third. "Could a man carry them away in his pocket?"

The master mason, who was a gruff kind of man, stood scratching his head, and said nothing at first. But, looking carefully on the ground, he discerned innumerable tracks of little feet, some with shoes and some barefoot. Following these tracks with his eye, he saw that they formed a beaten path towards the water side.

"Ah, I see what the mischief is," said he, nodding his head. "Those little rascals, the boys, — they have stolen our stones to build a wharf with!"

The masons immediately went to examine the new structure. And to say the truth, it was well worth looking at, so neatly and with such admirable skill had it been planned and finished. The stones were put together so securely that there was no danger of their being loosened by the tide, however swiftly it might sweep along. There was a broad and safe platform to stand upon, whence the little fishermen might cast their lines into deep water and draw up fish in abundance. Indeed, it almost seemed as if Ben and his comrades might be forgiven for taking the stones, because they had done their job in such a workmanlike manner.

"The chaps that built this wharf understood their business pretty well," said one of the masons. "I should not be ashamed of such a piece of work myself."

But the master mason did not seem to enjoy the joke. He was one of those unreasonable people who

care a great deal more for their own rights and privileges than for the convenience of all the rest of the world.

"Sam," said he, more gruffly than usual, "go call a constable."

So Sam called a constable, and inquiries were set on foot to discover the perpetrators of the theft. In the course of the day warrants were issued, with the signature of a justice of the peace, to take the bodies of Benjamin Franklin and other evil-disposed persons who had stolen a heap of stones. If the owner of the stolen property had not been more merciful than the master mason, it might have gone hard with our friend Benjamin and his fellow-laborers. But, luckily for them, the gentleman had a respect for Ben's father, and, moreover, was amused with the spirit of the whole affair. He therefore let the culprits off pretty easily.

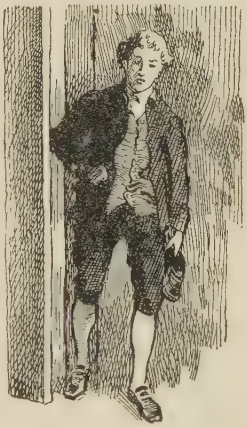
But, when the constables were dismissed, the poor boys had to go through another trial, and receive sentence, and suffer execution, too, from their own fathers. Many a rod, I grieve to say, was worn to the stump on that unlucky night.

As for Ben, he was less afraid of a whipping than of his father's disapprobation. Mr. Franklin was a sagacious man, and also an inflexibly upright one. He had read much for a person in his rank of life, and had pondered upon the ways of the world, until he had gained more wisdom than a whole library of books could have taught him. Ben had a greater reverence for his father than for any other person in the world, as well on account of his spotless integrity as of his practical sense and deep views of things.

Consequently, after being released from the clutches of the law, Ben came into his father's presence with no small perturbation of mind.

"Benjamin, come hither," began Mr. Franklin, in his customary solemn and weighty tone.

The boy approached and stood before his father's chair, waiting reverently to hear what judgment this good man would pass upon his late offence. He felt that now the right and wrong of the whole matter would be made to appear.



Ben Came into His Father's Presence.

"Benjamin," said his father, "what could induce you to take property which did not belong to you?"

"Why, father," replied Ben, hanging his head at first, but then lifting his eyes to Mr. Franklin's face, "if it had been merely for my own benefit, I never should have dreamed of it. But I knew that the wharf would be a public convenience. If the owner of the stones should build a house with them, nobody will enjoy any advantage except himself. Now, I made use of them in a way that was for the advantage of many persons. I thought it right to aim at doing good to the greatest number."

"My son," said Mr. Franklin, solemnly, "as far as it was in your power, you have done a greater harm to the public than to the owner of the stones."

"How can that be, father?" asked Ben.

"Because," answered his father, "in building your

wharf with stolen materials, you have committed a moral wrong. There is no more terrible mistake than to violate what is eternally right for the sake of a seeming expediency. Those who act upon such a principle do the utmost in their power to destroy all that is good in the world."

"Heaven forbid!" said Benjamin.

"No act," continued Mr. Franklin, "can possibly be for the benefit of the public generally which involves injustice to any individual. It would be easy to prove this by examples. But, indeed, can we suppose that our all-wise and just Creator would have so ordered the affairs of the world that a wrong act should be the true method of attaining a right end? It is impious to think so. And I do verily believe, Benjamin, that almost all the public and private misery of mankind arises from a neglect of this great truth — that evil can produce only evil — that good ends must be wrought out by good means."

"I will never forget it again," said Benjamin, bowing his head.

"Remember," concluded his father, "that, whenever we vary from the highest rule of right, just so far we do an injury to the world. It may seem otherwise for the moment; but, both in time and in eternity, it will be found so."

To the close of his life Ben Franklin never forgot this conversation with his father; and we have reason to suppose that, in most of his public and private career, he endeavored to act upon the principles which that good and wise man had then taught him.

After the great event of building the wharf, Ben con-

tinued to cut wick yarn and fill candle moulds for about two years. But, as he had no love for that occupation, his father often took him to see various artisans at their work, in order to discover what trade he would prefer. Thus Ben learned the use of a great many tools, the knowledge of which afterwards proved very useful to him. But he seemed much inclined to go to sea. In order to keep him at home, and likewise to gratify his taste for letters, the lad was bound apprentice to his elder brother, who had lately set up a printing office in Boston.

Here he had many opportunities of reading new books and of hearing instructive conversation. He exercised himself so successfully in writing compositions, that, when no more than thirteen or fourteen years old, he became a contributor to his brother's newspaper. Ben was also a versifier, if not a poet. He made two doleful ballads — one about the shipwreck of Captain Worthilake; and the other about the pirate Black Beard, who, not long before, infested the American seas.

When Ben's verses were printed, his brother sent him to sell them to the townspeople wet from the press. "Buy my ballads!" shouted Benjamin, as he trudged through the streets with a basketful on his arm. "Who'll buy a ballad about Black Beard? A penny apiece! a penny apiece! Who'll buy my ballads?"

Basketful of Ballads.

If one of those roughly composed and rudely printed ballads could be discovered now, it would be worth more than its weight in gold.

In this way our friend Benjamin spent his boyhood and youth, until, on account of some disagreement with his brother, he left his native town and went to Philadelphia. He landed in the latter city, a homeless and hungry young man, and bought threepence worth of bread to satisfy his appetite. Not knowing where else to go, he entered a Quaker meeting-house, sat down, and fell fast asleep. He has not told us whether his slumbers were visited by any dreams. But it would have been a strange dream, indeed, and an incredible one, that should have foretold how great a man he was destined to become, and how much he would be honored in that very city where he was now friendless and unknown.

"And Bought Threepence Worth of Bread."

How Benjamin Franklin Became a Ready Writer

(From His Autobiography.)

From my infancy I was passionately fond of reading, and all the money that came into my hands was laid

out in the purchasing of books. I was very fond of voyages. My first acquisition was Bunyan's works in separate little volumes; I afterwards sold them to enable me to buy Burton's "Historical Collections." They were small chapmen's books, and cheap; forty volumes in all. My father's little library consisted chiefly of books in polemic divinity, most of which I read. I have often regretted that, at a time when I had such a thirst for knowledge, more proper books had not fallen in my way, since it was resolved I should not be bred to divinity. There was among them Plutarch's "Lives," which I read abundantly, and I still think that time spent to great advantage. There was also a book of Defoe's, called "An Essay on Projects," and another of Dr. Mather's, called "An Essay to do Good," which perhaps gave me a turn of thinking that had an influence on some of the principal future events of my life.

"I was Passionately Fond of Reading."

This bookish inclination at length determined my father to make me a printer, though he had already one son, James, of that profession. In 1717 my brother James returned from England with a press and letters to set up his business in Boston. I liked it much better than that of my father, but still had a hankering for the sea. To prevent the apprehended effect of such an inclination, my father was impatient to have me bound

to my brother. I stood out some time, but at last was persuaded, and signed the indenture, when I was yet but twelve years old. I was to serve an apprenticeship till I was twenty-one years of age, only I was to be allowed journeyman's wages during the last year.

In a little time I made a great progress in the business, and became a useful hand to my brother. I now had access to better books. An acquaintance with the apprentices of booksellers enabled me sometimes to borrow a small one, which I was careful to return soon, and clean. Often I sat up in my chamber reading the greatest part of the night, when the book was borrowed in the evening and to be returned in the morning, lest it should be found missing.

After some time a merchant — an ingenious, sensible man, Mr. Matthew Adams, who had a pretty collection of books — frequented our printing-office, took notice of me, and invited me to see his library, and very kindly proposed to lend me such books as I chose to read. I now took a strong inclination for poetry, and wrote some little pieces. My brother, supposing it might turn to account, encouraged me, and induced me to compose two occasional ballads. One was called "The Light-House Tragedy," and contained an account of the shipwreck of Captain Worthilake with his two daughters; the other was a sailors' song; on the taking of the famous Teach, or Blackbeard, the pirate.

They were wretched stuff, in street-ballad style; and when they were printed, my brother sent me about the town to sell them. The first sold prodigiously, the event being recent, and having made a great noise. This success flattered my vanity; but my father dis-

couraged me by criticising my performances, and telling me verse-makers were generally beggars. Thus I escaped being a poet, and probably a very bad one; but, as prose writing has been of great use to me in the course of my life, and was a principal means of my advancement, I shall tell you how in such a situation I acquired what little ability I may be supposed to have in that way.

There was another bookish lad in the town, John Collins by name, with whom I was intimately acquainted. We sometimes disputed, and very fond we were of argument, and very desirous of confuting one another. . . .

I sat down to put my arguments in writing, which I copied fair and sent to him. He answered and I replied. Three or four letters on a side had passed, when my father happened to find my papers and read them. Without entering into the subject in dispute, he took occasion to talk to me about my manner of writing; observed that though I had the advantage of my antagonist in correct spelling and pointing (which he attributed to the printing-house), I fell far short in elegance of expression, in method, and in perspicuity, of which he convinced me by several instances. I saw the justice of his remarks, and thence grew more attentive to my manner of writing, and determined to endeavor to improve my style.

About this time I met with an odd volume of the "Spectator." I had never before seen any of them. I bought it, read it over and over, and was much delighted with it. I thought the writing excellent, and wished if possible to imitate it. With that view I took some of the papers, and, making short hints of the sen-

timents in each sentence, laid them by a few days, and then, without looking at the book, tried to complete the papers again, by expressing each hinted sentiment at length, and as fully as it had been expressed before, in any suitable words that should occur to me. Then I compared my "Spectator" with the original, discovered some of my faults, and corrected them. But I found I wanted a stock of words, or a readiness in collecting and using them, which I thought I should have acquired before that time, if I had gone on making verses; since the continual search for words of the same import, but of different length to suit the measure, or of different sound for the rhyme, would have laid me under a constant necessity of searching for variety, and also have tended to fix that variety in my mind, and make me master of it. Therefore I took some of the tales in the "Spectator," and turned them into verse; and, after a time, when I had pretty well forgotten the prose, turned them back again.

Franklin Drawing the Lightning from the Clouds.

I also sometimes jumbled my collection of hints into confusion, and after some weeks endeavored to reduce them into the best order before I began to form the

full sentences and complete the subject. This was to teach me method in the arrangement of the thoughts. By comparing my work with the original, I discovered many faults and corrected them; but I sometimes had the pleasure to fancy that, in certain particulars of small consequence, I had been fortunate enough to improve the method or the language, and this encouraged me to think that I might in time come to be a tolerable English writer, of which I was extremely ambitious. . . .

My brother had, in 1720 or 1721, begun to print a newspaper. It was the second that appeared in America, and was called the *New England Courant*. The only one before it was the *Boston News Letter*. I remember his being dissuaded by some of his friends from the undertaking, as not likely to succeed, one newspaper being in their judgment enough for America. At this time, 1771, there are not less than five and twenty. He went on, however, with the undertaking. I was employed to carry the papers to the customers, after having worked in composing the types and printing off the sheets.

He had some ingenious men among his friends, who amused themselves by writing little pieces for this paper, which gained it credit, and made it more in demand, and these gentlemen often visited us. Hearing their conversations and their accounts of the approbation their papers were received with, I was excited to try my hand among them.

But, being still a boy and suspecting that my brother would object to printing anything of mine in his paper, if he knew it to be mine, I contrived to

disguise my hand, and, writing an anonymous paper, I put it at night under the door of the printing-house. It was found in the morning, and communicated to his writing friends when they called in as usual. They read it, commented on it in my hearing, and I had the exquisite pleasure of finding it met with their approbation, and that, in their different guesses of the author, none were named but men of some character among us for learning and ingenuity. I suppose that I was rather lucky in my judges, and that they were not really so very good as I then believed them to be. Encouraged, however, by this attempt, I wrote and sent in the same way to the press several other pieces that were equally approved; and I kept my secret till all my fund of sense for such performances was exhausted, and then discovered it, when I began to be considered a little more by my brother's acquaintance. . . .

My chief acquaintances at this time [in Philadelphia] were Charles Osborne, Joseph Watson, and James Ralph; all lovers of reading. The two first were clerks to an eminent scrivener or conveyancer in the town, Charles Brockden, the other was a clerk to a merchant. Watson was a pious, sensible young man, of great integrity; the others rather more lax in their principles of religion, particularly Ralph, who, as well as Collins, had been unsettled by me; for which they both made me suffer. Osborne was sensible, candid, frank; sincere and affectionate to his friends; but, in literary matters, too fond of criticism. Ralph was ingenious, genteel in his manners, and extremely eloquent; I think I never knew a prettier talker. Both were great admirers of poetry, and began to try their hands in

little pieces. Many pleasant walks we have had together on Sundays in the woods, on the banks of the Schuylkill, where we read to one another, and conferred on what we had read.

Ralph was inclined to give himself up entirely to poetry, not doubting that he might make great proficiency in it, and even make his fortune by it. He pretended that the greatest poets must, when they first began to write, have committed as many faults as he did. Osborne endeavored to dissuade him, assured him he had no genius for poetry, and advised him to think of nothing beyond the business he was bred to; that in the mercantile way, though he had no stock, he might by his diligence and punctuality recommend himself to employment as a factor, and in time acquire wherewith to trade on his own account. I approve for my part the amusing one's self with poetry now and then, so far as to improve one's language, but no farther.

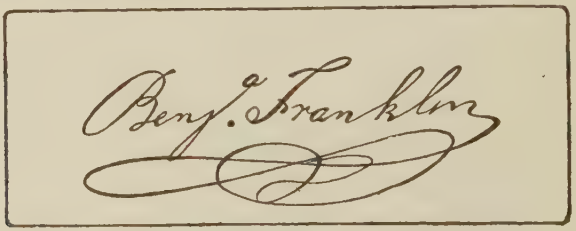
On this it was proposed that we should each of us, at our next meeting, produce a piece of our own composing, in order to improve by our mutual observations, criticisms, and corrections. As language and expression were what we had in view, we excluded all considerations of invention, by agreeing that the task should be a version of the eighteenth Psalm, which describes the descent of a Deity.

When the time of our meeting drew nigh, Ralph called on me first, and let me know his piece was ready. I told him I had been busy, and having little inclination, had done nothing. He then showed me his piece for my opinion, and I much approved it, as it appeared to me to have great merit.

"Now," said he, "Osborne never will allow the least merit in anything of mine, but makes a thousand criticisms out of mere envy. He is not so jealous of you; I wish, therefore, you would take this piece and produce it as yours. I will pretend not to have had time, and so produce nothing. We shall then hear what he will say to it."

It was agreed, and I immediately transcribed it, that it might appear in my own hand.

We met. Watson's performance was read; there were some beauties in it, but many defects. Osborne's was read; it was much better. Ralph did it justice; remarked some faults, but applauded the beauties. He himself had nothing to produce. I was backward, seemed desirous of being excused, had not had sufficient time to correct, etc. But no excuse could be admitted; produce I must. It was read and repeated. Watson and Osborne gave up the contest, and joined in applauding it. Ralph only made some criticisms, and proposed some amendments; but I defended my text.



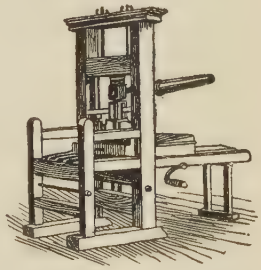
Franklin's Signature.

Osborne was severe against Ralph, and told me he was no better able to criticise than compose verses. As these two were returning home, Osborne expressed himself still more strongly in favor of what he thought my

production; having before refrained, as he said, lest I should think he meant to flatter me.

"But who would have imagined," said he, "that Franklin was capable of such a performance? such painting, such force, such fire! He has even improved on the original. In common conversation he seems to have no choice of words; he hesitates and blunders, and yet, how he writes!" When we next met, Ralph discovered the trick we had played, and Osborne was laughed at.

This transaction fixed Ralph in his resolution of becoming a poet. I did all I could to dissuade him from it, but he continued scribbling verses till Pope cured him. He became, however, a pretty good prose writer. . . .



Franklin's Printing Press.

It was often eleven at night, and sometimes later, before I had finished my distribution for the next day's work; for the little jobs sent in by our other friends now and then put us back. But so determined I was to continue doing a sheet a day of the folio, that one night, when having imposed my forms I thought my day's work over, one of them by accident was broken, and two pages reduced to *pi*. I immediately distributed and composed it over again before I went to bed; and this industry, visible to our neighbors, began to give us character and credit. Particularly I was told that mention being made of the new printing-office at the merchants' every-night club, the general opinion was that it must fail, there being

already two printers in the place, Keimer and Bradford. . . .

George Webb, who had found a female friend that lent him wherewith to purchase his time of Keimer, now came to offer himself as a journeyman to us. We could not then employ him; but I foolishly let him know, as a secret, that I soon intended to begin a newspaper, and might then have work for him. My hopes of success, as I told him, were founded on this: that the then only newspaper, printed by Bradford, was a paltry thing, wretchedly managed, no way entertaining, and yet was profitable to him, — I therefore freely thought a good paper would scarcely fail of good encouragement. I requested Webb not to mention it; but he told it to Keimer, who immediately, to be beforehand with me, published proposals for one himself, on which Webb was to be employed. I was vexed at this; and to counteract them, not being able to commence our paper, I wrote several amusing pieces for Bradford's paper, under the title of "The Busy Body," which Breintnal continued some months. By this means the attention of the public was fixed on that paper; and Keimer's proposals, which we burlesqued and ridiculed, were disregarded. He began his paper, however, and before carrying it on three-quarters of a year, with at most only ninety subscribers, he offered it me for a trifle; and I, having been ready some time to go on with it, took it in hand directly, and it proved in a few years extremely profitable to me.[1]

Our first papers made quite a different appearance

[1] It was called the *Pennsylvania Gazette*. Franklin and Meredith began the paper with No. 40, September 25th, 1729.

from any before in the province; a better type and better printed; but some remarks of my writing on the dispute then going on between Governor Burnet and the Massachusetts Assembly, struck the principal people, occasioned the paper and the manager of it to be much talked of, and in a few weeks brought them all to be our subscribers.

Their example was followed by many, and our number went on growing continually. This was one of the first good effects of my having learned a little to scribble; another was, that the leading men, seeing a newspaper now in the hands of those who could also handle a pen, thought it convenient to oblige and encourage me. Bradford still printed the votes, and laws, and other public business. He had printed an address of the House to the Governor, in a coarse, blundering manner; we reprinted it elegantly and correctly, and sent one to every member. They were sensible of the difference, it strengthened the hands of our friends in the House, and they voted us their printers for the year ensuing. . . .

About this time [1729] there was a cry among the people for more paper-money; only fifteen thousand pounds being extant in the province, and that soon to be sunk. The wealthy inhabitants opposed any addition, being against all paper currency, from the apprehension that it would depreciate as it had done in New England, to the injury of all creditors. We had discussed this point in our Junto, where I was on the side of an addition, being persuaded that the first small sum struck in 1723 had done much good by increasing the trade, employment, and number of

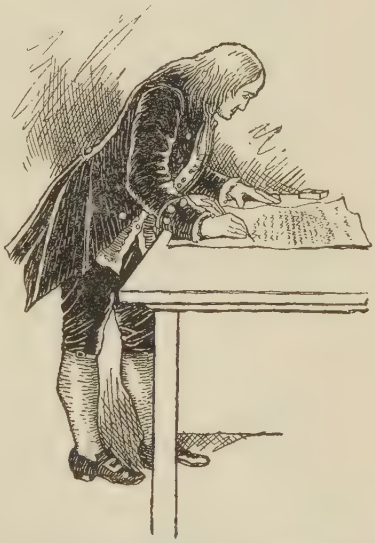
inhabitants in the province, since I now saw all the old houses inhabited, and many new ones building; whereas I remembered well, when I first walked about the streets of Philadelphia eating my roll, I saw many of the houses in Walnut Street, between Second and Front Streets, with bills on their doors, "to be let," and many likewise in Chestnut Street and other streets, which made me think the inhabitants of the city were, one after another, deserting it.

Our debates possessed me so fully of the subject that I wrote and printed an anonymous pamphlet on it, entitled, "The Nature and Necessity of a Paper Currency." It was well received by the common people in general; but the rich men disliked it, for it increased and strengthened the clamor for more money; and, they happening to have no writers among them that were able to answer it, their opposition slackened, and the point was carried by a majority in the House. My friends there, who considered I had been of some service, thought fit to reward me by employing me in printing the money; a very profitable job, and a great help to me. This was another advantage gained by being able to write. . . .

In 1732 I first published my Almanac, under the name of "Richard Saunders"; it was continued by me about twenty-five years, and commonly called "Poor Richard's Almanac." I endeavored to make it both entertaining and useful, and it accordingly came to be in such demand that I reaped considerable profit from it; vending annually near ten thousand. And observing that it was generally read, scarce any neighborhood in the province being without it, I considered it as a

Franklin at Work in Keimer's Office

proper vehicle for conveying instruction among the common people, who bought scarcely any other books. I therefore filled all the little spaces, that occurred between the remarkable days in the Calendar, with proverbial sentences, chiefly such as inculcated industry and frugality as the means of procuring wealth and thereby securing virtue; it being more difficult for a man in want to act always honestly, than, to use here one of those proverbs, "it is hard for an empty sack to stand upright."

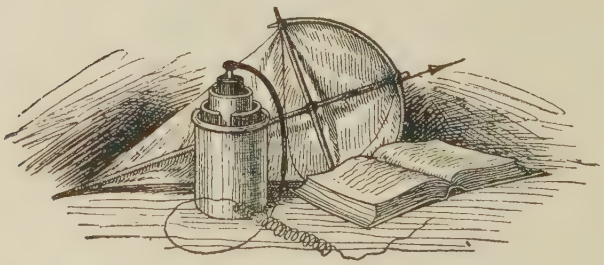


Franklin Signing the Declaration of Independence.

These proverbs, which contained the wisdom of many ages and nations, I assembled and formed into a connected discourse prefixed to the Almanac of 1757, as the harangue of a wise old man to the people attending an auction. The bringing all these scattered counsels thus into a focus enabled them to make greater impression. The piece, being universally approved, was copied in all the newspapers of the American continent, reprinted in Britain on a large sheet of paper, to be stuck up in houses; two translations were made of it in France, and great numbers bought by the clergy and gentry, to distribute gratis among their poor parishioners and tenants. In Pennsylvania, as it dis-

couraged useless expense in foreign superfluities, some thought it had its share of influence in producing that growing plenty of money, which was observable for several years after its publication.

I considered my newspaper, also, as another means of communicating instruction, and in that view frequently reprinted in it extracts from the "Spectator," and other moral writers; and sometimes published little pieces of my own, which had been first composed for reading in our *Junto*. Of these are a Socratic dialogue, tending to prove that, whatever might be his parts and abilities, a vicious man could not properly be called a man of sense; and a discourse on self-denial, showing that virtue was not secure, till its practice became a habitude, and was free from the opposition of contrary inclinations.



ROBERT FULTON

By JAMES PARTON.

Robert Fulton.

WHEN John Fitch began to build his first steamboat at Philadelphia, there was living in that city an artist, twenty years of age, named Robert Fulton. We can still read, in the Philadelphia Directory for 1785, the following line: —

> "Robert Fulton, Miniature Painter, corner of Second and Walnut Streets."

He was more than a miniature painter, for though it was from that favorite branch of the art that he chiefly gained his livelihood, he painted portraits, landscapes, and allegorical pieces in the taste of that time. Such was his success in his profession, that, at the age of twenty-one, when he had been but four years employed in it, he was able to present his widowed mother with a farm of eighty-four acres, and to afford the expense of a voyage to Europe, with a view to improvement in his art, as well as the re-establishment of his

health, which his excessive application had impaired. The farm, it is true, cost but four hundred dollars, since it was in the far west of Pennsylvania; but this does not detract from the merit of the action. It was a worthy beginning of an honorable career.

Robert Fulton, born near Lancaster, in Pennsylvania, in 1765, was the son of an Irish tailor, who came to this country in early life, prospered in business, and retired to a large and productive farm in Lancaster county, the garden of Pennsylvania. The father of Benjamin West, who lived a few miles off, and the father of Robert Fulton, were old friends, and the boy consequently heard much of the fame and success of the painter who had left home, a poor unfriended youth, to become the favorite artist of George III.

At school Robert Fulton was a dull and troublesome boy. Books were disgusting to him. He had the impudence to tell his teacher one day that his head was so full of original notions that there was no vacant room in it for the contents of dusty books. But, out of school, he exhibited intelligence and talent. He drew well almost from his infancy; and, as he grew older, he showed a remarkable aptitude for mechanics. The shops of Lancaster were his favorite places of resort. Being late at school one day, which was by no means an uncommon occurrence, his master asked him the cause. He said he had been at a shop near by pounding lead; and he showed the result of his labors in a very neatly shaped lead pencil, which, he said, was the best pencil he had ever had. At thirteen he assisted in celebrating the Fourth of July, by discharging sky-rockets made by himself on a plan of his own.

During the Revolution Congress had a gun-shop at Lancaster, which was haunted by the boy, who assisted the workmen by drawing plans of gun-stocks, and by suggesting methods of repairing broken muskets. There, too, he was frequently busy in attempting to construct an air-gun.

A Gun Shop which was Haunted by the Boy.

It was in the summer of 1779, when he was fourteen years of age, that he conceived an idea which, twenty-five years later, had important consequences. There was a heavy old flat-boat, on a river in the neighborhood, which was much used by the boys in their fishing excursions. It was propelled by means of poles. Being extremely fatigued, on one occasion, by poling this cumbrous craft against the stream, it occurred to the boy that, perhaps, paddle-wheels turned by a crank could be applied to the boat. Soon after the experiment was tried with so much success that he and his companions never afterward used the boat except with paddles. This boyish invention (which, though not new, was original with *him*) is supposed to have prepossessed his mind in favor of paddle-wheels for steamboats.

At seventeen, his father having died, this precocious youth established himself in Philadelphia as a miniature painter, and returned on his twenty-first birthday to his early home, with the means in his pocket of rendering his mother independent for life. That pious deed performed, he sailed for England, to seek instruction in his art at the hands of his father's friend, Benjamin West. When he left America poor John Fitch had not yet completed his first steamboat; but his plans had been published, his company formed, and the boat begun. We may be absolutely certain that a young man like Fulton, with one of the best mechanical heads in the world, full of curiosity with regard to the mechanic arts from his childhood, must have well known what John Fitch was doing.

The great painter received the son of his father's friend with open arms, accepted him as a pupil, and lodged him at his house in London for several years. Fulton, however, never became a great artist. He was an excellent draughtsman, a good colorist, and a diligent workman; but he had not the artist's imagination or temperament. His mind was mechanical; he loved to contrive, to invent, to construct; and we find him, accordingly, withdrawing from art, and busying himself, more and more, with mechanics; until, at length, he adopted the profession of civil engineer. His last effort as an artist was the painting of a panorama, exhibited at Paris in 1797, which he afterward sold in order to raise money to pursue his experiments with steam.

Robert Fulton was never capable of claiming to be the inventor of the steamboat. It is, nevertheless, to

his knowledge of mechanics, and to his resolution and perseverance, that the world is indebted for the final triumph of that invention.

Recent investigations enable us to show the chain of events which led him to embark in this enterprise. His attention was first called to the subject in Philadelphia, by the operations of John Fitch, in 1785 and 1786. Next, fifteen years after, Fulton visited a steamboat in Scotland, which, though unsuccessful, was really propelled by the power of steam for short distances, at the rate of six miles an hour. To please the stranger, who showed an extreme curiosity to witness its operation, this boat was set in motion, and Fulton made drawings of the machinery. A year or two after, he was in France again, where he made the acquaintance of the gentleman who had in his possession the papers left in France by John Fitch, which contained full details of his plans for applying steam to the propulsion of vessels. We have the testimony of this gentleman, that the papers and drawings of John Fitch remained in the possession of Robert Fulton for "several months." Aided thus by the knowledge and experience of previous inventors, enjoying the immense advantage of the improved steam-engine of James Watt, being himself an excellent mechanic and a very superior draughtsman, having the appearance and manners of a gentleman, and an extensive acquaintance with the leading men of his time, he began the execution of his task with advantages possessed by no previous experimenter in steamboats.

But even these would not have availed if he had not had the good fortune to find a wealthy co-operator.

Chancellor Livingstone, of New York, was then the American Minister at the court of Napoleon. Besides being a man of large estate, he was a man of public spirit, with a strong interest in practical improvements. Chancellor Livingstone, to his immortal honor, became first the friend, then the patron, and finally the partner of Robert Fulton.

In 1803 the first steamboat of Livingstone and Fulton was built in France upon the Seine. When she was almost ready for the experimental trip, a misfortune befell her which would have dampened the ardor of a man less determined than Fulton. Rising one morning after a sleepless night, a messenger from the boat, with horror and despair written upon his countenance, burst into his presence, exclaiming: —

"Oh sir! the boat has broken in pieces and gone to the bottom!"

For a moment Fulton was utterly overwhelmed. Never in his whole life, he used to say, was he so near despairing as then. Hastening to the river, he found, indeed, that the weight of the machinery had broken the framework of the vessel, and she lay on the bottom of the river, in plain sight, a mass of timber and iron. Instantly, with his own hands, he began the work of raising her, and kept at it, without food or rest, for twenty-four hours, — an exertion which permanently injured his health. His death in the prime of life, was, in all probability, remotely caused by the excitement, exposure, and toil of that terrible day and night.

In a few weeks the boat, sixty-six feet long and eight wide, was rebuilt, and the submerged engine replaced in her. The National Institute of France and a great

concourse of Parisians witnessed her trial trip in July, 1803. The result was encouraging, but not brilliant. The boat moved slowly along the tranquil Seine, amid the acclamations of the multitude; but the quick eye of Fulton at once discerned that the machinery was defective and inadequate, and that, in order to give the invention a fair trial, it was necessary to begin anew, to procure an engine far more powerful and a boat better adapted to the purpose. As Chancellor Livingstone was about to return home, it was resolved that the next attempt should be made at New York; and an engine for the purpose was ordered from the manufactory at Birmingham of Watt and Boulton.

In September, 1807, the famous Clermont, one hundred and sixty tons, was completed. Monday, Sept. 10, was the day appointed for a grand trial trip to Albany, and by noon a vast crowd had assembled on the wharf to witness the performance of what was popularly called "Fulton's Folly." Fulton himself declares that, at noon on that day, not thirty persons in the city had the slightest faith in the success of the steamboat; and that, as the boat was putting off, he heard many "sarcastic remarks." At one o'clock, however, she moved from the dock, — vomiting smoke and sparks from her pine-wood fires, and casting up clouds of spray from her uncovered paddle-wheels. As her speed increased, the jeers of the incredulous were silenced, and soon the departing voyagers caught the sound of cheers. In a few minutes, however, the boat was observed to stop, which gave a momentary triumph to the scoffers. Fulton perceived that the paddles, being too long, took too much hold of the water, and

he stopped the boat for the purpose of shortening them. This was soon done, and the boat resumed her voyage with increased speed, and kept on her course all that day, all the succeeding night, and all the next morning, until at one o'clock on Tuesday she stopped at the seat of Chancellor Livingstone, one hundred and ten miles from New York. There she remained till the next morning at nine, when she continued her voyage toward Albany, where she arrived at five in the afternoon. Her running time was thirty-two hours, which

Caught the Sound of Cheers.

is at the rate of nearly five miles an hour. Returning immediately to New York, she performed the distance in thirty hours; exactly five miles an hour.

The Clermont was immediately put upon the river as a packet-boat, and plied between New York and Albany until the close of navigation, being always crowded with passengers. Enlarged during the winter, she resumed her trips in the spring of 1808, and continued to run with great success and with profit to her owners.

It was long, however, before the river boatmen

were disposed to tolerate this new and terrible rival. At first, it is said, they fled in affright from the vicinity of the monster, fearing to be set on fire or run down by her. Afterward, regaining their courage, they made so many attempts to destroy her that the Legislature of the State passed a special act for her protection.

Fulton devoted the rest of his life to the improvement of the steamboat. He lived to see the value of his labors universally recognized, and he acquired by them a considerable fortune. He died Feb. 24, 1815, aged fifty years, leaving a wife and four children, two of whom are still living in New York. He was able to leave his wife an income of nine thousand dollars a year, as well as five hundred dollars a year for each of his children till they were twelve years old, and a thousand dollars a year afterward till they were twenty-one. So, at least, runs his will written a year before his death. His remains lie in Trinity Churchyard, in the city of New York.

Robert Fulton was, in every respect, an honor to his country and his profession. Tall, handsome, and well-bred, he easily made friends, whose regard he retained by his sincerity, generosity, and good-humor. His crowning virtue was that indomitable resolution which enabled him to bear patiently the most cruel disappointments, and to hold calmly on his way till he had conquered a sublime success.

THE POET HORACE

By JAMES PARTON.

HORACE.

HOW strange that so many American parents should name their boys Horace! I suppose that in New England there are a hundred Horaces to one Virgil; while there are a hundred people who enjoy the poetry of Virgil to one that keenly relishes that of Horace. Leaving this mystery to be cleared up by philosophers, I will endeavor to relate in a few words the interesting story of the poet's life; our knowledge of which is chiefly derived from the innumerable allusions to himself and his affairs in his own works.

His father was a Roman slave, who, some years before Horace was born, obtained his freedom. "Everybody has a fling at me," he says in one of his satires (the sixth of Book I.), "because I am a freedman's son." He owed his name to the fact that his father's master belonged to the Horatian tribe; though it was long supposed that he was named Horatius because his master was a member of the celebrated family of the Horatii, three of whom had a

great fight one day with the Curiatii, — as school-boys remember.

Having become a free man, the father of the poet established himself as an auctioneer, which was then, as it is now, a profitable business, especially in times of general distress. The elder Horace by the exercise of his vocation acquired a considerable fortune, with which he bought a mountain farm in the south of Italy, in the midst of the rugged and romantic Apennines. Here, sixty-five years before Christ, Horace was born; and, amid the grandeur and loveliness of this mountain region, he grew up, and nourished that love of natural beauty which appears in so many of his poems. It was here, he tells us, that when he was a young child he wandered from his father's house, and, being tired at length, lay down under a thicket of laurel and myrtle, where he was found by anxious friends fast asleep, with his little hands full of the wild flowers he had gathered on the way.

His father, he assures us, was a man of noble disposition and fine understanding; but of his mother he never speaks; from which we may infer that she died before he was old enough to know her. He pays a tribute to his father's virtues in a passage that has been read millions of times with pleasure.

"If," he says, "my faults are few and not heinous (like moles upon a beautiful skin, perfect but for them); if no man can justly accuse me of avarice, meanness, or of frequenting low haunts; if, indeed (to speak in my own praise), I am chaste, innocent, and dear to my friends, I owe it all to my father; who, though far from rich, living on an unfertile farm, would not send

me to school under the pedantic Havius, where boys of rank, sprung from great centurions, with their satchels and tablets slung over their left arms, used to go with their school money in their hands on the very day the term was up; but had the energy to bring me, a child, to Rome, to be taught the accomplishments which Roman knights and senators teach their children. And yet, if anyone had looked at my clothes, and at the slaves who waited upon me in a city so populous, he would certainly have thought that the cost of all this was supplied from the revenues of an hereditary estate. My father himself, of all guardians the most faithful, was continually looking on when my teachers were with me. But why multiply words? He it was who kept me chaste (the first of the virtues); preserving me not only from actual transgression, but even from the appearance of it; nor did he fear lest, by and by, some one should make it a reproach to him that a son, educated at so much cost, should turn out only an auctioneer. And if I had been only that, I should never have complained. The narrowness of his fortune rendered his conduct the more admirable, and calls for more gratitude on my part. As long as I am a sane man, never can I be ashamed of a father such as mine was."

This is a rough translation for poetry; but the charm of the passage lies in its meaning. Horace was twelve years of age when this generous father, unwilling to subject his boy to the taunts of the young aristocrats of his own neighborhood, took him to Rome, where he could pursue his studies and live on terms of equality with his fellows. His father, however, always discouraged any inclination the boy may have had to

aspire to a higher rank than his own. He appears to have supposed that he could give his son the education of a man of rank, and then make him content to spend his life as an auctioneer. Many fathers have indulged a dream like this; but I never heard of one who realized it.

At seventeen Horace, after having enjoyed a rigorous drill in the rudiments of knowledge under severe teachers at Rome, repaired to Athens (which was only a few days' sail from his father's house) to continue his studies. There he began to write verses in the Greek language; but soon discovering the impossibility of equalling the Greek poets in their own language, wrote thenceforth only in Latin.

Great events transpired in Italy while Horace was growing to manhood. Cæsar crossed the Rubicon, overthrew Pompey, reigned, and was killed by Brutus, while Horace was a student. After the death of Cæsar Brutus went to Athens, where the young poet was then residing, along with a great number of Roman youth completing their education. Among the men who joined the forces of Brutus at this time, with the design of restoring the republican constitution, was Horace, to whom Brutus assigned a rank about equal to that of a colonel in a modern army. Under Brutus he served with gallantry and general approval, until the disastrous battle of Philippi, when the republican cause was irretrievably ruined. Horace was borne away, he says, by the torrent of fugitives, and lost his shield in the flight. Brutus and Cassius having committed suicide, he gave up the struggle and made the best of his way home.

Arriving among his native mountains, worn with the toils of war and saddened by defeat, he found his father dead, his inheritance confiscated, and his head in danger. His life, however, was spared; and he went soon after to Rome, a poor young man of letters, in search of the means of subsistence. He tells us himself what vocation he entered into: —

"My wings being clipped, and deprived of house and land, audacious poverty drove me to the making of verses."

He earned his living at this occupation for some time, and even acquired property by it sufficient to buy an under-clerkship in the Roman treasury, — an office of small salary but smaller duties.

While he was plodding on, writing verses for hire, young Virgil came to Rome, with the laurel of the successful poet on his brow; welcomed and fêted by high and low; a guest even in the imperial palace, and in the house of Mæcenas, the favorite and minister of the Emperor Augustus. Virgil, discovering the great genius of Horace, mentioned him to Mæcenas, who sent for the unknown poet. Long after he reminded Mæcenas, in one of his satires, of their first interview: —

"When first I came into your presence, I spoke but a few words with a stammering tongue, for I was as bashful as a child."

Mæcenas, he adds, took no further notice of him for nine months; but at the expiration of that time he sent for him, and "ordered him to be inrolled among the number of his friends." By Mæcenas he was presented to the emperor, and both remained his cordial

friends as long as he lived. Mæcenas gave him a villa a few miles from Rome, and Augustus bestowed upon him a tract of land, which yielded him an income sufficient for his wants, with which he was perfectly contented.

He divided his time henceforth between the country and the town. When cloyed with the pleasures of the imperial city, he had but to mount his mule and ride fifteen minutes, to reach his farm. His land, well-covered with forests and lying on both sides of a spark-

Horace at the Home of Mæcenas.

ling river, was tilled by five free families and eight slaves, and produced grain, wine and olives. It abounded in pleasant, secluded scenes, fit for a poet's leisure; and there, too, he delighted to receive his friends from Rome; Mæcenas himself being glad to repose there from the toils of government. To this day, Horace's farm is continually visited by travellers residing in Rome, especially by English and Americans.

So many of the visitors, indeed, speak the English language, that the peasantry of the neighborhood suppose Horace to have been some illustrious Englishman, and that the visitors come there to pay homage to the tomb of their countryman. Knowing that Horace was not one of the saints, they cannot conceive of any other cause for such a concourse of visitors to so remote a spot.

Secure in his fortune, Horace enjoyed life in a moderate and rational manner, bestowing upon his poems an amount of labor which would surprise some of our easy verse-makers. He was a poet for thirty-five years, yet the whole of his works could be printed in one number of a newspaper, and leave room besides for this sketch of his life. No man has better followed the advice which he himself lays down for authors: —

"You that intend to write what deserves to be read more than once, correct and erase much."

His poems, light and chatty as they seem, are the quintessence of all that he thought, felt, observed, and experienced during the whole of the fifty-seven years that he lived; and, besides being that, they throw a flood of light upon the life of the Roman people. He knew well that his works would endure for ages. In a little poem on his works he says, with the noble confidence of patient genius: —

"I have constructed a monument more lasting than brass, and grander than the pyramids' royal height; which not the wasting rain, nor the powerful north wind, nor an endless succession of years, nor the round of the seasons, shall be able to destroy. I shall not wholly die; but a large part of me shall not be en-

tombed at my funeral. Posterity will renew my praises from age to age, as long as the priest shall ascend the steps of the capitol with the vestal virgin silent at his side."

Yes; and longer! The Roman priest ascends no more the capitol steps; the capitol itself has disappeared; the language of Rome has become, in Rome itself, an unknown tongue; and still the well-wrought poems of Horace are enjoyed wherever on earth there are educated minds more than forty years of age. Virgil is the poet for youth; Horace is the treasure of men.

The learned and public-spirited Judge Daly of the New York Court of Common Pleas, who had in his possession the papers and correspondence of Chancellor Kent, said that the chancellor knew Horace almost by heart, having read all his poems eight times over, and never going out without a little Horace in his pocket. The poet Wordsworth was exceedingly fond of Horace, and so was a man as unlike Wordsworth as can be imagined, — the fat Louis XVIII., King of France after Waterloo. This king, it is said, did actually know very many of the poems of Horace by heart.

It was the strong desire of Horace that he might not live longer than his beloved friend Mæcenas. His words, expressive of this wish, have been well translated: —

"Ah! if untimely fate should snatch thee hence, —
Thou, of my soul a part, —
Why should I linger on with deadened sense
And ever-aching heart, —
A worthless fragment of a fallen shrine?
No, no! one day beholds thy death and mine!"

This desire was destined to be gratified. The two friends did not, indeed, depart this life on the same day, but in the same year. Mæcenas died in July, bequeathing Horace to the friendship of Augustus. Horace died in November of the same year, which was the eighth before the birth of Christ.

Horace was a short man, inclining to corpulency, of a happy disposition, and much disposed to innocent merriment; simple in his habits; not less pleased when mingling with the people in the market-place, or supping at home upon bread and onions, than when reclining in the banqueting-room of the emperor's palace. And again the question occurs, Why should so many of the grave people of New England name their children after this merry poet?

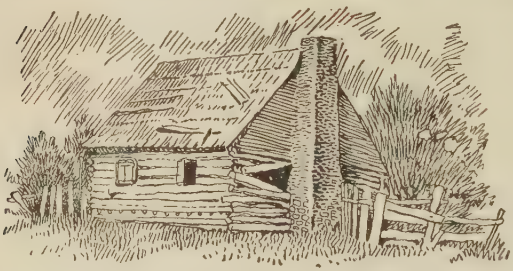
ANDREW JACKSON

By GEORGE BANCROFT.

Andrew Jackson.

SOUTH CAROLINA gave a birthplace to Andrew Jackson. On its remote frontier, far upon the forest-clad banks of the Catawba, in a region where the settlers were just beginning to cluster, his eye first saw the light. There his infancy sported in the ancient forests, and his mind was nursed to freedom by their influence. He was the youngest son of an Irish emigrant, of Scottish origin, who, two years after the great war of Frederick of Prussia, fled to America for relief from indigence and oppression. His birth was in 1767, at a time when the people of our land were but a body of dependent colonists, scarcely more than two millions in number, scattered along an immense coast, with no army, or navy, or union; and exposed to the attempts of England to control America by the aid of military force. His boyhood grew up in the midst of the contest with Great Britain. The first great political truth

that reached his heart, was, that all men are free and equal; the first great fact that beamed on his understanding was his country's independence.



Jackson's Early Home.

The strife, as it increased, came near the shades of his own upland residence. As a boy of thirteen he witnessed the scenes of horror that accompany civil war; and when but a year older, with an elder brother, he shouldered his musket and went forth to strike a blow for his country.

Joyous era for America and for humanity! But for him, the orphan boy, the events were full of agony and grief. His father was no more. His oldest brother fell a victim to the War of the Revolution; another, his companion in arms, died of wounds received in their joint captivity; his mother went down to the grave a victim of grief and efforts to rescue her sons; and when peace came he was alone in the world, with no kindred to cherish him and little inheritance but his own untried powers.

The nation which emancipated itself from British rule organizes itself; the confederation gives way to the constitution; the perfecting of that constitution — that grand event of a thousand years of modern history — is accomplished; America exists as a people, gains unity as a government, and assumes its place among the nations of the earth.

The next great office to be performed by America is the taking possession of the wilderness. The magnificent western valley cried out to the civilization of popular power that the season had come for its occupation by cultivated man.

Behold, then, our orphan hero, sternly earnest, consecrated to humanity from childhood by sorrow, having neither father, nor mother, nor sister, nor surviving brother, so young and yet so solitary, and therefore bound the more closely to collective man — behold him elect for his lot to go forth and assist in laying the foundation of society in the great valley of the Mississippi.

At the very time when Washington was pledging his own and future generations to the support of the popular institutions which were to be the light of the human race — at a time when the governments of the Old World were rocking to their centre, and the mighty fabric that had come down from the middle ages was falling in — the adventurous Jackson, in the radiant glory and boundless hope and confident intrepidity of twenty-one, plunged into the wilderness, crossed the great mountain barrier that divides the western waters from the Atlantic, followed the paths of the early hunters and fugitives, and, not content with the nearer neighborhood to his parent State, went still farther and farther to the west till he found his home in the most beautiful region on the Cumberland. There, from the first, he was recognized as the great pioneer; and in his courage the coming emigrants were sure to find a shield.

The lovers of adventure began to pour themselves

into the territory whose delicious climate and fertile soil invited the presence of social man. The hunter, with his rifle and his axe, attended by his wife and children; the herdsman, driving the few cattle that were to multiply as they browsed; the cultivator of the soil, — all came to the inviting region. Wherever the bending mountains opened a pass — wherever the buffaloes and the beasts of the forest had made a trace, these sons of nature, children of humanity, in the highest sentiment of personal freedom, came to occupy the lovely wilderness whose prairies blossomed everywhere profusely with wild flowers — whose woods in spring put to shame by their magnificence the cultivated gardens of man. . . .

The men of Tennessee were now a people, and they were to send forth a man to stand for them in the Congress of the United States — that avenue to glory — that home of eloquence — the citadel of popular power; and with one consent they united in selecting the foremost man among their lawgivers — Andrew Jackson.

The love of his constituents followed him to the American Congress; and he had served but a single term when the State of Tennessee made him one of its representatives in the American Senate, of which Jefferson was at the time the presiding officer.

Thus when he was scarcely more than thirty he had guided the settlement of the wilderness; swayed the deliberations of a people in establishing their fundamental laws; acted as their representative, and again as the representative of his organized commonwealth, disciplined to a knowledge of the power of the people

and the power of the States; the associate of republican statesmen, the friend and companion of Jefferson.

The men who framed the constitution of the United States, many of them did not know the innate life and self-preserving energy of their work. They feared that freedom could not endure, and they planned a strong government for its protection. During his short career in Congress, Jackson showed his quiet, deeply seated, innate, intuitive faith in human freedom, and in the institutions which rested on that faith. He was ever, by his votes and opinions, found among those who had confidence in humanity; and in the great division of minds this child of the woodlands, this representative of forest life in the west, appeared modestly and firmly on the side of liberty. . . .

Jackson was Elected Major-General.

During his period of service in the Senate, Jackson was elected major-general by the brigadiers and field officers of the militia of Tennessee. Resigning his place in the Senate, he was made judge of the supreme court in law and equity; such was the confidence in his clearness of judgment, his vigor of will, and his integrity of purpose, to deal justly among the turbulent who crowded into the new settlements of Tennessee.

On all great occasions his influence was deferred to. When Jefferson had acquired for the country the whole of Louisiana, and there seemed some hesitancy on the part of Spain to acknowledge our possession, the services of Jackson were solicited by the national administration, and would have been called into full exercise but for the peaceful termination of the incidents that occasioned the summons.

In the long series of aggressions on the freedom of the seas, and the rights of the American flag, Jackson, though in his inland home the roar of the breakers was never heard, and the mariner never was seen, resented the injuries wantonly inflicted on our commerce and on our sailors, and adhered to the new maritime code of Republicanism.

When the continuance of wrong compelled the nation to resort to arms, Jackson, led by the instinctive knowledge of his own greatness, yet with true modesty of nature, confessed his willingness to be employed on the Canada frontier and aspired to the command to which Winchester was appointed. We may ask, what would have been the result if the conduct of the northwestern army had, at the opening of the war, been intrusted to a man who in action was ever so fortunate that he seemed to have made destiny capitulate to his vehement will? . . .

Then followed the memorable events of the double battles of Emuckfaw, and the glorious victory of Tohopeka, where the anger of the general against the faltering was more appalling than the war-whoop and the rifle of the savage; the fiercely contested field of Enotochopco, where the general, as he attempted to

draw his sword to cut down a flying colonel who was leading a regiment from the field, broke again the arm which was but newly knit together; and, quietly replacing it in the sling, with his commanding voice arrested the flight of the troops, and himself led them back to victory.

In six short months of vehement action the most terrible Indian war in our annals was brought to a close; the prophets were silenced; the consecrated region of the Creek nation reduced. Through scenes of blood the avenging hero sought only the path to peace. Thus Alabama, a part of Mississippi, a part of his own Tennessee, and the highway to the Floridas, were his gifts to the Union. These were his trophies.

Genius as extraordinary as military events can call forth was summoned into action in this rapid, efficient, and most fortunately conducted war. The hero descended the watercourses of Alabama to the neighborhood of Pensacola, and longed to plant the eagle of his country on its battlements.

Time would fail, and words be wanting, were I to dwell on the magical influence of his appearance in New Orleans. His presence dissipated gloom and dispelled alarm; at once he changed the aspect of despair into a confidence of security and a hope of acquiring glory. Every man knows the tale of the sudden, and yet deliberate daring which led him, on the night of the twenty-third of December, to precipitate his little army on his foes, in the thick darkness, before they grew familiar with their encampment, scattering dismay through veteran regiments of England, defeating them, and arresting their progress by a far inferior force. . . .

These were great victories for the nation; over himself he won a greater. Had not Jackson been renowned for the impetuosity of his passions, for his defiance of others' authority, and the unbending vigor of his self-will? Behold the savior of Louisiana, all garlanded with victory, viewing around him the city he had preserved, the maidens and children whom his heroism had protected, yet standing in the presence of a petty judge, who gratifies his wounded vanity by an abuse of his judicial power. Every breast in the crowded audience heaves with indignation. He, the passionate, the impetuous — he whose power was to be humbled, whose honor questioned, whose laurels tarnished, alone stood sublimely serene; and when the craven judge trembled, and faltered, and dared not proceed, himself, the arraigned one, bade him take courage, and stood by the law even when the law was made the instrument of insult and wrong on himself at the moment of his most perfect claim to the highest civic honors. . . .

The culture of Jackson's mind had been much promoted by his services and associations in the war. His discipline of himself as the chief in command, his intimate relations with men like Livingston, the wonderful deeds in which he bore a part, all matured his judgment and mellowed his character.

Peace came with its delights; once more the country rushed forward in the development of its powers; once more the arts of industry healed the wounds that war had inflicted; and, from commerce and agriculture and manufactures, wealth gushed abundantly under the free activity of unrestrained enterprise. And Jackson re-

turned to his own fields and his own pursuits, to cherish his plantation, to care for his servants, to enjoy the affection of the most kind and devoted wife, whom he respected with the gentlest deference, and loved with a spotless purity.

There he stood, like one of the mightiest forest trees of his own West, vigorous and colossal, sending its summit to the skies, and growing on its native soil in wild and inimitable magnificence, careless of beholders. From every part of the country he received appeals to his political ambition, and the severe modesty of his well-balanced mind turned them all aside. He was happy in his farm, happy in seclusion, happy in his family, happy within himself.

Jackson and an Indian Chief.

But the passions of the southern Indians were not allayed by the peace with Great Britain; and foreign emissaries were still among them, to inflame and direct their malignity. Jackson was called forth by his country to restrain the cruelty of the treacherous and unsparing Seminoles. It was in the train of the events of this war that he placed the American eagle on St.

Mark's and above the ancient towers of St. Augustine. His deeds in that war, of themselves form a monument to human power, to the celerity of his genius, to the creative fertility of his resources, to his intuitive sagacity. As Spain, in his judgment, had committed aggressions, he would have emancipated her islands; of the Havana, he caused the reconnaissance to be made; and, with an army of five thousand men, he stood ready to guarantee her redemption from colonial thraldom.

But when peace was restored, and his office was accomplished, his physical strength sunk under the pestilential influence of the climate, and, fast yielding to disease, he was borne in a litter across the swamps of Florida towards his home. It was Jackson's character that he never solicited aid from any one; but he never forgot those who rendered him service in the hour of need. At a time when all around him believed him near his end, his wife hastened to his side; and, by her tenderness and nursing care, her patient assiduity, and the soothing influence of devoted love, withheld him from the grave.

He would have remained quietly at his home, but that he was privately informed his conduct was to be attainted by some intended congressional proceedings; he came, therefore, into the presence of the people's representatives at Washington, only to vindicate his name; and, when that was achieved, he once more returned to his seclusion among the groves of the Hermitage.

It was not his own ambition which brought him again to the public view. The affection of Tennessee compelled him to resume a seat on the floor of the American Senate, and, after a long series of the intensest political

strife, Andrew Jackson was elected President of the United States. . . .

In the relations of this country to the world Jackson demanded for America equality. The time was come for her to take her place over against the most ancient and most powerful states of the Old World, and to gain the recognition of her pretensions. He revived the unadjusted claims for injuries to our commerce, committed in the wantonness of European hostilities; and he taught the American merchant and the American sailor to repose confidingly under the sanctity of the American flag. Nor would he consent that the payment of indemnities which were due should be withheld or delayed. Even against France the veteran of the West enforced the just demand of America with an heroic vigor which produced an abiding impression on the world. He did this in the love of peace. "You have set your name to the most important document of your public life," said one of his cabinet to him as he signed the annual message that treated of the unpaid indemnity. "This paper may produce a war."

"There will be no war," answered Jackson decisively; and rising on his feet, as was his custom when he spoke warmly, he expressed with solemnity his hatred of war, bearing witness to its horrors and protesting against its crimes. He loved peace; and to secure permanent tranquillity he made the rule for his successors, as well as for himself, in the intercourse of America with foreign powers, "to demand nothing but what is right, and to submit to nothing that is wrong." . . .

In life, his career had been like the blaze of the sun in the fierceness of its noonday glory; his death was

lovely as the summer's evening, when the sun goes down in tranquil beauty without a cloud. To the majestic energy of an indomitable will, he joined a heart capable of the purest and most devoted love, rich in the tenderest affections. On the bloody battlefield of Tohopeka, he saved an infant that clung to the breast of its dying mother; in the stormiest season of his presidency, he paused at the imminent moment of decision to counsel a poor suppliant that had come up to him for relief. Of the strifes in which he was engaged in his earlier life, not one sprung from himself, but in every case he became involved by standing forth as the champion of the weak, the poor, and the defenceless, to shelter the gentle against oppression, to protect the emigrant against the avarice of the speculator. His generous soul revolted at the barbarous practice of duels, and by no man in the land have so many been prevented.

HERMITAGE.

The sorrows of those that were near to him went deeply into his soul; and at the anguish of the wife whom he loved, the orphans whom he adopted, he would melt into tears, and weep and sob like a child. No man in private life so possessed the hearts of all around him; no public man of this century ever returned to private life with such an abiding mastery over the affections of the people. No man with truer instinct received American ideas; no man expressed

them so completely, or so boldly, or so sincerely. He was as sincere a man as ever lived. He was wholly, always, and altogether sincere and true.

Up to the last, he dared do anything that it was right to do. He united personal courage and moral courage beyond any man of whom history keeps the record. Before the nation, before the world, before coming ages, he stands forth the representative, for his generation, of the American mind. And the secret of his greatness is this; by intuitive conception he shared and possessed all the creative ideas of his country and his time; he expressed them with dauntless intrepidity; he enforced them with an immovable will; he executed them with an electric power that attracted and swayed the American people. The nation, in his time, had not one great thought of which he was not the boldest and clearest expositor.

Not danger, not an army in battle array, not wounds, not widespread clamor, not age, not the anguish of disease, could impair in the least degree the vigor of his steadfast mind. The heroes of antiquity would have contemplated with awe the unmatched hardihood of his character; and Napoleon, had he possessed his disinterested will, could never have been vanquished. Jackson never was vanquished. He was always fortunate. He conquered the wilderness; he conquered the savage; he conquered the bravest veterans trained in the battlefields of Europe; he conquered everywhere in statesmanship; and when death came to get the mastery over him, he turned the last enemy aside as tranquilly as he had done the feeblest of his adversaries, and passed from earth in the triumphant consciousness of immortality.

STONEWALL JACKSON[1]

(From Stonewall Jackson and The American Civil War.)

By LIEUTENANT-COLONEL G. A. R. HENDERSON.

Stonewall Jackson.

IN the first quarter of the century, on the hills which stand above the Ohio River, but in different States of the Union, were born two children, destined, to all appearances, to lives of narrow interests and thankless toil. They were the sons of poor parents, without influence or expectations; their native villages, deep in the solitudes of the West, and remote from the promise and possibilities of great cities, offered no road to fortune. . . .

Never was an obscure existence more irretrievably marked out than for these children of the Ohio; and yet, before either had grown gray, the names of Abraham Lincoln, President of the United States, and of Stonewall Jackson, Lieutenant-General in the Confederate Army, were household words in both America

[1] Through courtesy of the publishers, Longmans, Green & Co.

and Europe. Descendants of the pioneers, those hardy borderers, half soldiers and half farmers, who held and reclaimed, through long years of Indian warfare, the valleys and prairies of the West, they inherited the best attributes of a frank and valiant race. Simple yet wise, strong yet gentle, they were gifted with all the qualities which make leaders of men. Actuated by the highest principles, they both ennobled the cause for which they fought; and while the opposition of such kindred natures adds to the dramatic interest of the Civil War, the career of the great soldier, although a theme perhaps less generally attractive, may be followed as profitably as that of the great statesman. Providence dealt with them very differently. The one was struck down by a mortal wound before his task was well begun; his life, to all human seeming, was given in vain, and his name will ever be associated with the mournful memories of a lost cause and a vanished army. The other, ere he fell beneath the assassin's stroke, had seen the abundant fruits of his mighty labors; his sun had set in a cloudless sky. And yet the resemblance between them is very close. Both dared

> For that sweet mother-land which gave them birth
> Nobly to do, nobly to die. Their names,
> Graven on memorial columns, are a song
> Heard in the future; . . . more than wall
> And rampart, their examples reach a hand
> Far thro' all years, and everywhere they meet
> And kindle generous purpose, and the strength
> To mould it into action pure as theirs.

Jackson, in one respect, was more fortunate than

Lincoln. Although born to poverty, he came of a Virginia family which was neither unknown nor undistinguished. . . .

John Jackson, the great-grandfather of our hero, landed in America in 1748, and it was not long before he set his face towards the wilderness. The emigrants from Ulster appear as a rule to have moved westward. The States along the coast were already colonized, and, despite its fertility, the country was little to their taste. But beyond the border in the broad Appalachian valley which runs from the St. Lawrence to Alabama, on the banks of the great rivers, — the Susquehanna, the Ohio, the Cumberland, and the Tennessee, — they found a land after their own heart, a soil with whose properties they were familiar, the sweet grasses and soft contours of their native hills. Here, too, there was ample room for their communities, for the West was as yet but sparsely tenanted. No inconsiderable number, penetrating far into the interior, settled eventually about the headwaters of the Potomac and the James. The highland region was the debatable ground of the United States. So late as 1756 the State of Virginia extended no farther than the crests of the Blue Ridge. Two hundred miles westward, forts flying French colors dominated the valley of the Ohio, and the wild and inhospitable tract, a very labyrinth of mountains, which lay between, was held by the fierce tribes of the "Six Nations" and Leni-Lenape. Two years later the French had been driven back to Canada; but it was not till near the close of the century that the savage was finally dispossessed of his spacious hunting grounds.

It was on these green uplands, where fight and foray were as frequent as once on the Scottish border, that John Jackson and his wife, a fellow passenger to America, by name Elizabeth Cummins, first pitched their camp, and here is still the home of their descendants. . . .

The story of his early years is soon told. As a blue-eyed child, with long, fair hair, he was curiously thoughtful and exceedingly affectionate. His temper was generous and cheerful. His truthfulness was proverbial, and his little sister found in him the kindest of playmates and the sturdiest of protectors. He was distinguished, too, for his politeness, although good manners were by no means rare in the rustic West. The manly courtesy of the true American is no exotic product; nor is the universal deference to woman peculiar to any single class. The farmer of the backwoods might be ignorant of the conventionalities, but the simplicity and unselfishness which are the root of all good breeding could be learned in West Virginia as readily as in Richmond.

At school he was a leader in every game, and his proficiency in the saddle proved him a true Virginian. Fox-hunting and horse-racing were popular amusements; and his uncle not only kept a stable of well-bred horses, but had a four-mile race-course on his own grounds. As a light-weight jockey, the future general was a useful member of the household, and it was the opinion of the neighborhood that "if a horse had any winning qualities whatever in him, young Jackson never failed to bring them out."

In the management of the estate he learned early to

put his shoulder to the wheel. Transporting timber from the forest to the saw-mill was one of his most frequent tasks, and tradition records that if a tree were to be moved from ground of unusual difficulty, or if there were one more gigantic than the rest, the party of laborers was put under his control, and the work was sure to be effected.

One who knew him well has described his character. "He was a youth of exemplary habits, of indomitable will and undoubted courage. He was not what is nowadays termed brilliant, but he was one of those untiring, matter-of-fact persons, who would never give up an undertaking until he had accomplished his object. He learned slowly, but what he got into his head he never forgot. He was not quick to decide, except when excited, and then, when he made up his mind to do a thing, he did it on short notice and in quick time. Once, while on his way to school, an overgrown rustic behaved rudely to one of the school-girls. Jackson fired up and told him he must apologize at once or he would thrash him. The big fellow, supposing that he was more than a match for him, refused, whereupon Jackson pitched into him, and gave him a severe pounding."

And gave Him a Severe Pounding.

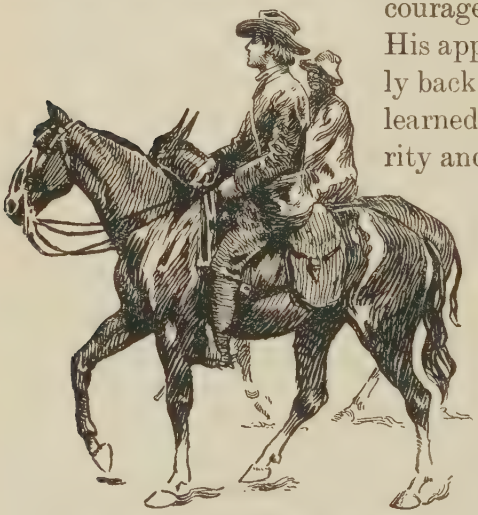
It was his openly expressed wish for larger advantages than those offered by a country school that brought about his opportunity.

In 1841, at the age of seventeen, he became a constable of the county. A sort of minor sheriff, he had to execute the decrees of the justices, to serve their warrants, to collect small debts, and to summon witnesses. It was a curious office for a boy, but a year or two before he had been seized with some obscure form of dyspepsia, and the idea that a life on horseback, which his duties necessitated, might restore his health, had induced his relatives to obtain the post for him. Jackson himself seems to have been influenced by the hope that his salary would help towards his education, and by the wish to become independent of his uncle's bounty.

His new duties were uncongenial, but, despite his youth, he faced his responsibilities with a determination which men of maturer years might well have envied. In everything he was scrupulously exact. His accounts were accurately kept; he was punctuality itself, and his patience was inexhaustible. For two years he submitted cheerfully to the drudgery of his position, re-establishing his health, but without advancing a single step towards the goal of his ambition. But before he was nineteen his hopes were unexpectedly realized.

The Military Academy at West Point not only provided, at the expense of the nation, a sound and liberal education, but offered an opening to an honorable career. Nominations to cadetships were made by the Secretary of War, on the recommendation of members of Congress, and in 1842 a vacancy occurred which was to be filled by a youth from the Congressional District in which Clarksburg was included. Jackson,

informed of the chance by a friendly blacksmith, eagerly embraced it, and left no stone unturned to obtain his object. Every possible influence that could be brought to bear on the member for the district was immediately enlisted. To those who objected that his education was too imperfect to enable him even to enter the Academy, he replied that he had the necessary application, that he hoped he had the capacity, and that he was at least determined to try. His earnestness and courage won upon all. His application was strongly backed by those who had learned to value his integrity and exactness, and Mr. Hays, the member for the district, wrote that he would do all in his power to secure the appointment. No sooner had the letter been read than Jackson determined to go at once to Washington, in order that he might be ready to proceed to West Point without a moment's delay.



Rode off to Catch the Coach at Clarksburg.

Packing a few clothes into a pair of saddlebags, he mounted his horse, and accompanied by a servant, who was to bring the animal home, rode off to catch the coach at Clarksburg. It had already passed, but galloping on, he overtook it at the next stage, and on his

arrival at Washington, Mr. Hays at once introduced him to the Secretary of War. On presenting him, he explained the disadvantages of his education, but begged indulgence for him on account of his pluck and determination. The Secretary plied him with questions, but Jackson was not to be diverted from his purpose; and so good was the impression that he made that he then and there received his warrant, accompanied by some excellent advice. "Sir," said the Secretary, "you have a good name. Go to West Point, and the first man who insults you knock him down and have it charged to my account!"

Mr. Hays proposed that the new-fledged cadet should stay with him for a few days in order to see the sights of Washington. But as the Academy was already in session, Jackson, with a strong appreciation of the value of time, begged to decline. He was content to ascend to the roof of the Capitol, then still building, and look once on the magnificent panorama of which it is the centre.

At his feet lay the city, with its busy streets and imposing edifices. To the South ran the Potomac, bearing on its ample tide the snowy sails of many merchantmen, and spanned by a bridge more than a mile in length. Over against the Capitol, looking down on that wide-watered shore, stood the white porch of Arlington, once the property of Washington, and now the home of a young officer of the United States Army, Robert Edward Lee. Beyond Arlington lay Virginia, Jackson's native State, stretching back in leafy hills and verdant pastures, and far and low upon the western horizon his own mountains loomed faintly through the

summer haze. It was a strange freak of fortune that placed him at the very outset of his career within sight of the theatre of his most famous victories. It was a still stranger caprice that was to make the name of the simple country youth, ill-educated and penniless, as terrible in Washington as the name of the Black Douglas was once in Durham and Carlisle.

It was in July, 1842, that one of America's greatest soldiers first answered to his name on the parade-ground at West Point. Shy and silent, clad in Virginia homespun, with the whole of his personal effects carried in a pair of weather-stained saddlebags, the impression that he made on his future comrades, as the Secretary of War appears to have anticipated, was by no means favorable. The West Point cadets were then, as now, remarkable for their upright carriage, the neatness of their appointments and their soldierly bearing towards their officers and towards each other. The gray coatee, decorated with bright buttons and broad gold lace, the shako with tall plumes, the spotless white trousers, set off the trim young figures to the best advantage; and the full-dress parade of the cadet battalion, marked by discipline and precision in every movement, is still one of the most attractive of military spectacles.

The West Point Cadet.

These natty young gentlemen were not slow to detect the superficial deficiencies of the newcomer. A system of practical joking, carried to extremes, had long been

a feature of West Point life. Jackson, with the rusticity of the backwoods apparent at every turn, promised the tallest sport; and here it may be written once for all that, however nearly in point of character the intended victim reached the heroic standard, his outward graces were few. His features were well cut, his forehead high, his mouth small and firm, and his complexion fresh. Yet the *ensemble* was not striking, nor was it redeemed by grave eyes and a heavy jaw, a strong but angular frame, a certain awkwardness of movement, and large hands and feet.

His would-be tormentors, however, soon found they had mistaken their man. The homespun jacket covered a natural shrewdness which had been sharpened by responsibility. The readiness of resource which had characterized the whilom constable was more than a match for their most ingenious schemes; and baffled by a temper which they were powerless to disturb, their attempts at persecution, apparently more productive of amusement to their victim than to themselves, were soon abandoned.

Rough as was the life of the Virginia border, it had done something to fit this unpromising recruit for the give and take of his new existence. Culture might be lacking in the distant West, but the air men breathed was at least the blessed breath of independence. Each was what he made himself. A man's standing depended on his success in life, and success was within the reach of all. There, like his neighbors, Jackson had learned to take his own part; like them he acknowledged no superiority save that of actual merit, and believing that the richest prize might be won by energy and persever-

ance, without diffidence or misgivings he faced the future. He knew nothing of the life of the great nation of which he was so insignificant an atom, of the duties of the army, of the manners of its officers. He knew only that even as regards education he had an uphill task before him. He was indeed on the threshold of a new world, with his own way to make, and apparently no single advantage in his favor. But he came of a fighting race; he had his own inflexible resolution to support him, and his determination expressed itself in his very bearing. Four cadets, three of whom were afterwards Confederate generals, were standing together when he first entered the gates of the Academy. "There was about him," says one of them, "so sturdy an expression of purpose that I remarked, 'That fellow looks as though he had come to stay.'"

Jackson's educational deficiencies were more difficult of conquest than the good-will of his comrades. His want of previous training placed him at a great disadvantage. He commenced his career amongst "the Immortals" (the last section of the class), and it was only by the most strenuous efforts that he maintained his place. His struggles at the blackboard were often painful to witness. In the struggle to solve a problem he invariably covered both his face and uniform with chalk, and he perspired so freely, even in the coldest weather, that the cadets, with boyish exaggeration, declared that whenever "the General" — as he had at once been dubbed in honor of his namesake, the victor of New Orleans — got a difficult proposition, he was certain to flood the classroom. It was all he could do to pass his first examination.

"We were studying," writes a classmate, "algebra and analytical geometry that winter, and Jackson was very slow in his class. Just before the signal 'lights out,' he would pile up his grate with anthracite coal, and lying prone before it on the floor, would work away at his lessons by the glare of the fire, which scorched his very brain, till a late hour of the night." This evident determination to succeed not only aided his own efforts directly, but impressed his instructors in his favor.

If he could not master the portion of the text-book assigned for the day, he would not pass it over, but continued to work at it till he understood it. Thus it often happened that when he was called out to repeat his task, he had to reply that he had not yet reached the lesson of the day, but was employed upon the previous one. There was then no alternative but to mark him as unprepared, a proceeding which did not in the least affect his resolution.

Despite all drawbacks, his four years at the Academy were years of steady progress. "The Immortals" were soon left far behind. At the end of the first twelve months he stood fifty-first in a class of seventy-two, but when he entered the first class and commenced the study of logic, that bugbear to the majority, he shot from near the foot of the class to the top. In the final examination he came out seventeenth, notwithstanding that the less successful years were taken into account, and it was a frequent remark amongst his brother cadets that if the course had been a year longer he would have come out first.

His own satisfaction was complete. Not only was

his perseverance rewarded by a place sufficiently high to give him a commission in the artillery, but his cravings for knowledge had been fully gratified. West Point was much more than a military school. It was a university, and a university under the very strictest discipline, where the science of the soldier formed only a portion of the course. Subjects which are now considered essential to a military education were not taught at all. The art of war gave place to ethics and engineering; and mathematics and chemistry were considered of far more importance than topography and fortification. Yet with French, history and drawing, it will be admitted that the course was sufficiently comprehensive. No cadet was permitted to graduate unless he had reached a high standard of proficiency. Failures were numerous. In the four years the classes grew gradually smaller, and the survival of the fittest was a principle of administration which was rigidly observed.

The fact, then, that a man had passed the final examination at West Point was a sufficient passport that he had received a thorough education, that his mental faculties had been strengthened by four years of hard work, and that he was well equipped to take his place amongst his fellow-men. And it was more than this. Four years of the strictest discipline, for the cadets were allowed only one vacation during their whole course, were sufficient to break in even the most careless and the most slovenly to neatness, obedience, and punctuality. Such habits are not easily unlearned, and the West Point certificate was thus a guarantee of qualities that are everywhere useful.

It did not necessarily follow that because a cadet won a commission he remained a soldier. Many went to civil life, and the Academy was an excellent school for men who intended to find a career as surveyors or engineers. The great railway system of the United States was then in its infancy; its development offered endless possibilities, and the work of extending civilization in a vast and rapidly improving country had perhaps more attraction for the ambitious than the career of arms. The training and discipline of West Point were not, then, concentrated in one profession, but were disseminated throughout the States; and it was with this purpose that the institution of the Academy had been approved by Congress.

In the wars with England the militia of the different States had furnished the means both of resistance and aggression; but their grave shortcomings, owing principally to the lack of competent officers, had been painfully conspicuous. After 1814 the principle that the militia was the first line of defence was still adhered to, and the standing army was merely maintained as a school for generals and a frontier guard. It was expected, however, that in case of war the West Point graduates would supply the national forces with a large number of officers, who, despite their civil avocations, would at least be familiar with drill and discipline. This fact is to be borne in mind in view of the Civil War. The demands of the enormous armies then put into the field were utterly unprecedented, and the supply of West Pointers was altogether inadequate to meet them; but the influence of the Military Academy was conspicuous throughout. Not a few of the most

able generals were little more than boys; and yet, as a rule, they were far superior to those who came from the militia or volunteers. Four years of strict routine, of constant drill, and implicit subordination, at the most impressionable period of life, proved a far better training for command than the desultory and intermittent service of a citizen army.

During his stay at West Point Jackson's development was not all in one direction. He gained in health and strength. When he joined he had not yet attained his full height, which fell short of six feet by two inches. The constant drilling developed his frame. He grew rapidly, and soon acquired the erect bearing of the soldier; but notwithstanding the incessant practice in riding, fencing, and marching, his anatomical peculiarities still asserted themselves. It was with great difficulty that he mastered the elementary process of keeping step, and despite his youthful proficiency as a jockey, the regulation seat of the dragoon, to be acquired on the back of a rough cavalry trooper, was an accomplishment which he never mastered.

If it be added that his shyness never thawed, that he was habitually silent, it is hardly surprising to find that he had few intimates at the Academy. Caring nothing for the opinion of others, and tolerant of association rather than seeking it, his self-contained nature neither asked sympathy nor affection. His studious habits never left him. His only recreation was a rapid walk in the intervals of the classes. His whole thoughts and his whole energy were centred on doing his duty, and passing into the army with all the credit he could attain. Although he was thoroughly happy at West

Point, life to him, even at that early age, was a serious business, and most seriously he set about it.

Still, unsociable and irresponsive as he was, there were those in whose company he found pleasure, cadets who had studied subjects not included in the West Point course, and from whom there was something to be learned. It was an unwritten law of the Academy that those of the senior year should not make companions of the juniors.

But Jackson paid no heed to the traditionary code of etiquette. His acquaintances were chosen, regardless of standing, as often from the class below him as his own; and in yet another fashion his strength of character was displayed. Towards those who were guilty of dishonorable conduct he was merciless almost to vindictiveness. He had his own code of right and wrong, and from one who infringed it he would accept neither apology nor excuse. His musket, which was always scrupulously clean, was one day replaced by another in most slovenly order. He called the attention of his captain to his loss, and described the private mark by which it was to be identified.

That evening, at the inspection of arms, it was found in the hands of another cadet, who, when taxed with his offence, endeavored to shield himself by falsehood. Jackson's anger was unbounded, and for the moment his habitual shyness completely disappeared. He declared that such a creature should not continue a member of the Academy, and demanded that he should be tried by court-martial and expelled. It was only by means of the most persevering remonstrances on the part of his comrades and his officers that he

could be induced to waive his right of pressing the charge.

His regard for duty, too, was no less marked than his respect for truth. During one half-year his roommate was orderly-sergeant of his company, and this good-natured if perfunctory young gentleman often told Jackson that he need not attend the *reveille* roll-call, at which every cadet was supposed to answer to his name. Not once, however, did he avail himself of the privilege.

At the same time he was not altogether so uncompromising as at first sight he appeared. At West Point, as in after years, those who saw him interested or excited noticed that his smile was singularly sweet, and the cadets knew it revealed a warm heart within. Whenever, from sickness or misfortune, a comrade stood in need of sympathy, Jackson was the first to offer it, and he would devote himself to his help with a tenderness so womanly that it sometimes excited ridicule. Sensitive he was not, for of vanity he had not the slightest taint; but of tact and sensibility he possessed more than his share. If he was careless of what others thought of him, he thought much of them. Though no one made more light of pain on his own account, no one could have more carefully avoided giving pain to others, except when duty demanded it; and one of his classmates testifies that he went through the trying ordeal of four years at West Point without ever having a hard word or bad feeling from cadet or professor.

Nor did his comrades fail to remember that when he was unjustly blamed he chose to bear the imputation

silently rather than expose those who were really at fault. And so, even in that light-hearted battalion, his sterling worth compelled respect. All honored his efforts and wished him Godspeed. "While there were many," says Colonel Turnley, "who seemed to surpass him in intellect, in geniality, and in good-fellowship, there was no one of our class who more absolutely possessed the respect and confidence of all; and in the end 'Old Jack,' as he was always called, with his desperate earnestness, his unflinching straightforwardness, and his high sense of honor, came to be regarded by his comrades with something very like affection."

One peculiarity cannot be passed by.

When at study he always sat bolt upright at his table with his book open before him, and when he was not using pencil and paper to solve a problem, he would often keep his eyes fixed on the wall or ceiling in the most profound abstraction. "No one I have ever known," says a cadet who shared his barrack-room, "could so perfectly withdraw his mind from surrounding objects or influences, and so thoroughly involve his whole being in the subject under consideration. His lessons were uppermost in his mind, and to thoroughly understand them was always his determined effort. To make the author's knowledge his own was ever the point at which he aimed. This

He Always Sat Bolt Upright.

intense application of mind was naturally strengthened by constant exercise; and month by month, and year by year, his faculties of perception developed rapidly, until he grasped with unerring quickness the inceptive points of all ethical and mathematical problems."

This power of abstraction and of application is well worth noting, for not only was it remarkable in a boy, but, as we shall see hereafter, it had much to do with the making of the soldier.

At West Point Jackson was troubled with the return of the obscure complaint which had already threatened him, and there began that rigid observance of the laws of health which afterwards developed to almost eccentricity. His peculiar attitude when studying was due to the fear that if he bent over his work the compression of his internal organs might increase their tendency to disease.

And not only did he lay down rules for his physical regimen. A book of maxims which he drew up at West Point has been preserved, and we learn that his scrupulous exactness, his punctilious courtesy, and his choice of companions, were the outcome of much deliberation.

Nothing in this curious volume occurs to show that his thoughts had yet been turned to religion. It is as free from all reference to the teachings of Christianity as the maxims of Marcus Aurelius.

Every line there written shows that at this period of Jackson's life devotion to duty was his guiding rule; and, notwithstanding his remarkable freedom from egotism, the traces of an engrossing ambition and of absolute self-dependence were everywhere apparent. Many

of the sentiments he would have repudiated in after-life as inconsistent with humility; but there can be no question that it was a strong and fearless hand that penned on a conspicuous page the sentence: "You can be what you resolve to be." . . .

Jackson was already a man in years when he passed his final examination, and here the record of his boyhood may fitly close. He had made no particular mark at the Academy. His memory in the minds of his comrades was associated with his gravity, his silence, his kind heart, and his awkward movements. No one suspected him of nobler qualities than dogged perseverance and a strict regard for truth. The officers and sergeants of the cadet battalion were supplied by the cadets themselves; but Jackson was never promoted. In the mimic warfare of the playground at Brienne, Napoleon was master of the revels. His capacity for command had already been detected; but neither comrade nor teacher saw beneath the unpromising exterior of the West Point student a trace of aught save what was commonplace.

And yet there is much in the boyhood of Stonewall Jackson that resembles the boyhood of Napoleon, of all great soldiers the most original. Both were affectionate. Napoleon lived on bread and water that he might educate his brothers; Jackson saved his cadet's pay to give his sister a silk dress. Both were indefatigable students, impressed with the conviction that the world was to be conquered by force of intellect. Jackson, burning his lessons into his brain, is but the counterpart of the young officer who lodged with a professor of mathematics that he might attend his classes, and

who would wait to explain the lectures to those who had not clearly understood them. If the West Point cadets laughed at Jackson's large hands and feet, was not Napoleon, with his thin legs thrust into large boots, saluted by his friend's children, on his first appearance in uniform, with his nickname of *Le Chat Botté?* It is hard to say which was the more ridiculous, the spare and bony figure of the cadet, sitting bolt upright like a graven image in a tight uniform, with his eyes glued to the ceiling of his barrack-room, or the young man, with gaunt features, round shoulders, and uncombed hair, who wandered alone about the streets of Paris in 1795.

They had the same love of method and of order. The accounts of the Virginia constable were not more scrupulously kept than the ledgers of Napoleon's household, nor could they show a greater regard for economy than the tailor's bill, still extant, on which the future emperor gained a reduction of four sous. But it was not on such trivial lines alone that they run parallel. An inflexibility of purpose, an absolute disregard of popular opinion, and an unswerving belief in their own capacity, were predominant in both. They could say "No." Neither sought sympathy, and both felt that they were masters of their own fate. "You can be whatever you resolve to be" may be well-placed alongside the speech of the brigadier of five-and-twenty: "Have patience. I will command in Paris presently. What should I do there now?"

But here the parallel ends. In Jackson, even as a cadet, self was subordinate to duty. Pride was foreign to his nature. He was incapable of pretence, and his

simplicity was inspired by that disdain of all meanness which had been his characteristic from a child. His brain was disturbed by no wild visions; no intemperate ambition confused his sense of right and wrong. "The essence of his mind," as he had said of another of like mould, "was clearness, healthy purity, incompatibility with fraud in any of its forms." It was his instinct to be true and straightforward, as it was Napoleon's to be false and subtle. And if, as a youth, he showed no trace of marked intellectual power; if his instructors saw no sign of masterful resolution and a genius for command, it was because at West Point, as elsewhere, his great qualities lay dormant, awaiting the emergency that should call them forth.

SAMUEL JOHNSON

By NATHANIEL HAWTHORNE.

Samuel Johnson.

"SAM," said Mr. Michael Johnson, of Lichfield, one morning, "I am very feeble and ailing to-day. You must go to Uttoxeter in my stead, and tend the book-stall in the market-place there."

This was spoken above a hundred years ago, by an elderly man who had once been a thriving bookseller at Lichfield, in England. Being now in reduced circumstances, he was forced to go every market day and sell books at a stall, in the neighboring village of Uttoxeter.

His son, to whom Mr. Johnson spoke, was a great boy, of very singular aspect. He had an intelligent face; but it was seamed and distorted by a scrofulous humor, which affected his eyes so badly that sometimes he was almost blind. Owing to the same cause, his head would often shake with a tremulous motion, as if he were afflicted with the palsy. When Sam

was an infant, the famous Queen Anne had tried to cure him of this disease by laying her royal hands upon his head. But though the touch of a king or queen was supposed to be a certain remedy for scrofula, it produced no good effect upon Sam Johnson.

At the time which we speak of the poor lad was not very well dressed, and wore shoes from which his toes peeped out; for his old father had barely the means of supporting his wife and children. But, poor as the family were, young Sam Johnson had as much pride as any nobleman's son in England. The fact was, he felt conscious of uncommon sense and ability, which, in his own opinion, entitled him to great respect from the world. Perhaps he would have been glad if grown people had treated him as reverentially as his schoolfellows did. Three of them were accustomed to come for him every morning; and while he sat upon the back of one, the two others supported him on each side; and thus he rode to school in triumph.

Being a personage of so much importance, Sam could not bear the idea of standing all day in Uttoxeter market offering books to the rude and ignorant country people. Doubtless he felt the more reluctant on account of his shabby clothes, and the disorder of his eyes, and the tremulous motion of his head.

When Mr. Michael Johnson spoke Sam pouted and made an indistinct grumbling in his throat; then he looked his old father in the face and answered him loudly and deliberately.

"Sir," said he, "I will not go to Uttoxeter market!"

Mr. Johnson had seen a great deal of the lad's obstinacy ever since his birth; and while Sam was younger, the old gentleman had probably used the rod whenever occasion seemed to require. But he was now too feeble and too much out of spirits to contend with this stubborn and violent-tempered boy. He therefore gave up the point at once, and prepared to go to Uttoxeter himself.

"Well, Sam," said Mr. Johnson, as he took his hat and staff, "if for the sake of your foolish pride you can suffer your poor sick father to stand all day in the noise and confusion of the market when he ought to be in his bed, I have no more to say. But you will think of this, Sam, when I am dead and gone."

So the poor old man (perhaps with a tear in his eye, but certainly with sorrow in his heart) set forth towards Uttoxeter. The grayhaired, feeble, melancholy Michael Johnson! How sad a thing it was that he should be forced to go, in his sickness, and toil for the support of an ungrateful son who was too proud to do any thing for his father, or his mother, or himself! Sam looked after Mr. Johnson with a sullen countenance till he was out of sight.

But when the old man's figure, as he went stooping along the street, was no more to be seen, the boy's heart began to smite him. He had a vivid imagination, and it tormented him with the image of his father standing in the market-place of Uttoxeter and offering his books to the noisy crowd around him. Sam seemed to behold him arranging his literary merchandise upon the stall in such a way as was best calculated to attract notice. Here was Addison's

"Spectator," a long row of little volumes; here was Pope's translation of the Iliad and Odyssey; here were Dryden's poems, or those of Prior. Here, likewise were Gulliver's "Travels," and a variety of little gilt-covered children's books, such as "Tom Thumb," "Jack the Giant Queller," "Mother Goose's Melodies," and others which our great-grandparents used to read in their childhood. And here were sermons for the pious, and pamphlets for the politicians, and ballads, some merry and some dismal ones, for the country people to sing.

THE BOY'S HEART BEGAN TO SMITE HIM.

Sam in imagination, saw his father offer these books, pamphlets, and ballads, now to the rude yeoman who perhaps could not read a word; now to the country squires, who cared for nothing but to hunt hares and foxes; now to the children, who chose to spend their coppers for sugar plums or gingerbread rather than for picture books. And if Mr. Johnson should sell a book to man, woman, or child, it would cost him an hour's talk to get a profit of only sixpence.

"My poor father!" thought Sam to himself. "How his head will ache! and how heavy his heart will be! I am almost sorry that I did not do as he bade me."

Then the boy went to his mother, who was busy about the house. She did not know what had passed between Mr. Johnson and Sam.

"Mother," said he, "did you think father seemed very ill to-day?"

"Yes, Sam," answered his mother, turning with a flushed face from the fire, where she was cooking their scanty dinner. "Your father did look very ill and it is a pity he did not send you to Uttoxeter in his stead. You are a great boy now, and would rejoice I am sure, to do something for your poor father, who has done so much for you."

The lad made no reply. But again his imagination set to work and conjured up another picture of poor Michael Johnson. He was standing in the hot sunshine of the market-place, and looking so weary, sick, and disconsolate, that the eyes of all the crowd were drawn to him. "Had this old man no son," the people would say among themselves, "who might have taken his place at the book-stall while the father kept his bed?" And, perhaps, — but this was a terrible thought for Sam! — perhaps his father would faint away and fall down in the market-place, with his gray hair in the dust and his venerable face as deathlike as that of a corpse. And there would be the bystanders gazing earnestly at Mr. Johnson and whispering, "Is he dead? Is he dead?"

And Sam shuddered as he repeated to himself "Is he dead?"

"O, I have been a cruel son!" thought he, within his own heart. "God forgive me! God forgive me!"

But God could not yet forgive him; for he was not truly penitent. Had he been so, he would have hastened away that very moment to Uttoxeter, and have fallen at his father's feet, even in the midst of the crowded market-place. There he would have confessed

his fault, and besought Mr. Johnson to go home and leave the rest of the day's work to him. But such was Sam's pride and natural stubbornness that he could not bring himself to this humiliation. Yet he ought to have done so, for his own sake, for his father's sake, and for God's sake.

After sunset old Michael Johnson came slowly home and sat down in his customary chair. He said nothing to Sam; nor do I know that a single word ever passed between them on the subject of the son's disobedience. In a few years his father died, and left Sam to fight his way through the world by himself. It would make our story much too long were I to tell you even a few of the remarkable events of Sam's life. Moreover, there is the less need of this, because many books have been written about that poor boy, and the fame that he acquired, and all that he did or talked of doing after he came to be a man.

Old Mr. Johnson Sat Down in His Customary Chair.

But one thing I must not neglect to say. From his boyhood upward until the latest day of his life he never forgot the story of Uttoxeter market. Often when he was a scholar of the University of Oxford, or master of an academy at Edial, or a writer for the London booksellers, — in all his poverty and toil and in all his success, — while he was walking the streets without a shilling to buy food, or when the greatest men of England were proud to feast him at their table, — still

that heavy and remorseful thought came back to him, "I was cruel to my poor father in his illness!" Many and many a time, awake or in his dreams, he seemed to see old Michael Johnson standing in the dust and confusion of the market-place and pressing his withered hand to his forehead as if it ached.

Fifty years had passed away since young Sam Johnson had shown himself so hard-hearted towards his father. It was now market day in the village of Uttoxeter.

In the street of the village you might see cattle dealers with cows and oxen for sale, and pig drovers with herds of squeaking swine, and farmers with cartloads of cabbages, turnips, onions, and all other produce of the soil. Now and then a farmer's red-faced wife trotted along on horseback, with butter and cheese in two large panniers. The people of the village, with country squires, and other visitors from the neighborhood, walked hither and thither, trading, jesting, quarrelling and making just such a bustle as their fathers and grandfathers had made half a century before.

In one part of the street there was a puppet show, with a ridiculous merryandrew, who kept both grown people and children in a roar of laughter. On the opposite side was the old stone church of Uttoxeter, with ivy climbing up its walls and partly obscuring its Gothic windows.

There was a clock in the gray tower of the ancient church, and the hands on the dial-plate had now almost reached the hour of noon. At this busiest hour of the market a strange old gentleman was seen making his way among the crowd. He was very tall and bulky, and wore a brown coat and smallclothes, with black

worsted stockings and buckled shoes. On his head was a three-cornered hat, beneath which a bushy gray wig thrust itself out, all in disorder. The old gentleman elbowed the people aside, and forced his way through the midst of them with a singular kind of gait, rolling his body hither and thither, so that he needed twice as much room as any other person there.

"Make way, sir!" he would cry out, in a loud, harsh voice, when somebody happened to interrupt his progress. "Sir, you intrude your person into the public thoroughfare!"

"What a queer old fellow this is!" muttered the people among themselves, hardly knowing whether to laugh or to be angry.

But when they looked into the venerable stranger's face, not the most thoughtless among them dared to offer him the least impertinence. Though his features were scarred and distorted with the scrofula, and though his eyes were dim and bleared, yet there was something of authority and wisdom in his look, which impressed them all with awe. So they stood aside to let him pass; and the old gentleman made his way across the market-place, and paused near the corner of the ivy-mantled church. Just as he reached it the clock struck twelve.

On the very spot of ground where the stranger now stood some aged people remembered that old Michael Johnson had formerly kept his book-stall. The little children who had once bought picture books of him were grandfathers now.

"Yes; here is the very spot!" muttered the old gentleman to himself.

There this unknown personage took his stand and removed the three-cornered hat from his head. It was the busiest hour of the day. What with the hum of human voices, the lowing of cattle, the squeaking of pigs, and the laughter caused by the merryandrew, the market-place was in a very great confusion. But the stranger seemed not to notice it any more than if the silence of a desert were around him. He was rapt in his own thoughts. Sometimes he raised his furrowed brow to heaven, as if in prayer; sometimes he bent his head, as if an insupportable weight of sorrow were upon him. It increased the awfulness of his aspect that there was a motion of his head and an almost continual tremor throughout his frame, with singular twitchings and contortions of his features.

The hot sun blazed upon his unprotected head; but he seemed not to feel its fervor. A dark cloud swept across the sky and rain-drops pattered into the market-place; but the stranger heeded not the shower. The people began to gaze at the mysterious old gentleman with superstitious fear and wonder. Who could he be? Whence did he come? Wherefore was he standing bareheaded in the market-place? Even the school-boys left the merryandrew and came to gaze, with wide-open eyes, at this tall, strange-looking old man.

There was a cattle drover in the village who had recently made a journey to the Smithfield market, in London. No sooner had this man thrust his way through the throng and taken a look at the unknown personage than he whispered to one of his acquaintances, —

"I say, neighbor Hutchins, would ye like to know who this old gentleman is?"

"Ay, that I would," replied neighbor Hutchins, "for a queerer chap I never saw in my life. Somehow it makes me feel small to look at him. He's more than a common man."

"You may well say so," answered the cattle drover. "Why, that's the famous Doctor Samuel Johnson, who they say is the greatest and learnedest man in England. I saw him in London streets, walking with one Mr. Boswell."

Yes; the poor boy, the friendless Sam, had become the famous Doctor Samuel Johnson. He was universally acknowledged as the wisest man and greatest writer in all England. He had given shape and permanence to his native language by his Dictionary. Thousands upon thousands of people had read his "Idler," his "Rambler," and his "Rasselas." Noble and wealthy men and beautiful ladies deemed it their highest privilege to be his companions. Even the King of Great Britain had sought his acquaintance, and told him what an honor he considered it that such a man had been born in his dominions. He was now at the summit of literary renown.

But all his fame could not extinguish the bitter remembrance which had tormented him through life. Never, never had he forgotten his father's sorrowful and upbraiding look. Never, though the old man's troubles had been over so many years, had he forgiven himself for inflicting such a pang upon his heart. And now in his old age, he had come hither to do penance, by standing at noonday, in the market-place of Uttoxeter, on the very spot where Michael Johnson had once kept his book-stall. The aged and illustrious man had

done what the poor boy refused to do. By thus expressing his deep repentance and humiliation of heart, he hoped to gain peace of conscience and the forgiveness of God.

SAMUEL JOHNSON

By LORD MACAULAY.

At the time when Johnson commenced his literary career, a writer had little to hope from the patronage of powerful individuals. The patronage of the public did not yet furnish the means of comfortable subsistence. The prices paid by book-sellers to authors were so low that a man of considerable talents and unremitting industry could do little more than provide for the day which was passing over him. The lean kine had eaten up the fat kine. The thin and withered ears had devoured the good ears. The season of rich harvests was over, and the period of famine had begun. All that is squalid and miserable might now be summed up in the word poet.

Samuel Johnson.

That word denoted a creature dressed like a scarecrow. Even the poorest pitied him; and they well might pity him. For if their condition was equally abject, their aspirings were not equally high, nor their sense of insult equally acute. To lodge in a garret up four pair of stairs; to dine in a cellar among footmen out of place; to translate ten hours a day for the wages of a ditcher; to be hunted by bailiffs from one

haunt of beggary and pestilence to another; from Grub Street to St. George's Fields, and from St. George's Fields to the alleys behind St. Martin's Church; to sleep on a bulk in June, and amidst the ashes of a glass-house in December; to die in a hospital, and to be buried in a parish vault, was the fate of more than one writer who, if he had lived thirty years earlier, would have been admitted to the sittings of the Kitcat or the Scriblerus Club, would have sat in Parliament, and would have been intrusted with embassies to the High Allies; who, if he had lived in our time, would have found encouragement scarcely less munificent in Albemarle Street or in Paternoster Row.

A Creature Dressed Like a Scarecrow.

As every climate has its peculiar diseases, so every walk of life has its peculiar temptations. The literary character, assuredly, has always had its share of faults, vanity, jealousy, morbid sensibility. To these faults were now superadded the faults which are commonly found in men whose livelihood is precarious, and whose principles are exposed to the trial of severe distress. All the vices of the gambler and of the beggar were blended with those of the author. The prizes in the wretched lottery of book-making were scarcely less ruinous than the blanks. If good fortune came, it came in such a manner that it was almost certain to be abused. After months of starvation and despair, a full third night or a well-received dedication filled the pocket of the lean, ragged, unwashed poet with

guineas. He hastened to enjoy those luxuries with the images of which his mind had been haunted while he was sleeping amidst the cinders and eating potatoes at the Irish ordinary in Shoe Lane. A week of taverns soon qualified him for another year of night-cellars.

Such was the life of Savage, of Boyse, and of a crowd of others. Sometimes blazing in gold-laced hats and waistcoats; sometimes lying in bed because their coats had gone to pieces, or wearing paper cravats because their linen was in pawn; sometimes drinking Champagne and Tokay with Betty Careless; sometimes standing at the window of an eating house in Porridge Island, to snuff up the scent of what they could not afford to taste; they knew luxury; they knew beggary; but they never knew comfort.

These men were irreclaimable. They looked on a regular and frugal life with the same aversion which an old gypsy or a Mohawk hunter feels for a stationary abode, and for the restraints and securities of civilized communities. They were as untamable, as much wedded to their desolate freedom, as the wild ass. They could no more be broken in to the offices of social man than the unicorn could be trained to serve and abide by the crib. It was well if they did not, like beasts of a still fiercer race, tear the hands which ministered to their necessities. To assist them was impossible; and the most benevolent of mankind at length became weary of giving relief which was dissipated with the wildest profusion as soon as it had been received.

A few eminent writers were more fortunate. Pope had been raised above poverty by the active patronage which, in his youth, both the great political parties had

extended to his Homer. Young had received the only pension ever bestowed, to the best of our recollection, by Sir Robert Walpole, as the reward of mere literary merit. One or two of the many poets who attached themselves to the Opposition, Thomson in particular, and Mallett, obtained, after much severe suffering, the means of subsistence from their political friends. Richardson, like a man of sense, kept his shop; and his shop kept him, which his novels, admirable as they are, would scarcely have done. But nothing could be more deplorable than the state even of the ablest men, who at that time depended for subsistence on their writings. Johnson, Collins, Fielding and Thomson were certainly four of the most distinguished persons that England produced during the eighteenth century. It is well known that they were all four arrested for debt.

Into calamities and difficulties such as these Johnson plunged in his twenty-eighth year. From that time till he was three or four and fifty, we have little information respecting him; little, we mean, compared with the full and accurate information which we possess respecting his proceedings and habits toward the close of his life. He emerged at length from cock-lofts and sixpenny ordinaries into the society of the polished and the opulent. His fame was established. A pension sufficient for his wants had been conferred on him; and he came forth to astonish a generation with which he had almost as little in common as with Frenchmen or Spaniards.

In his early years he had occasionally seen the great; but he had seen them as a beggar. He now came among them as a companion. The demand for amuse-

ment and instruction had, during the course of twenty years, been gradually increasing. The price of literary labor had risen; and those rising men of letters with whom Johnson was henceforth to associate were, for the most part, persons widely different from those who had walked about with him all night in the streets for want of a lodging. Burke, Robertson, the Wartons, Gray, Mason, Gibbon, Adam Smith, Beattie, Sir William Jones, Goldsmith, and Churchill were the most distinguished writers of what may be called the second generation of the Johnsonian age. Of these men Churchill is the only one in whom we can trace the stronger lineaments of that character which, when Johnson first came to London, was common among authors. Of the rest, scarcely any had felt the pressure of severe poverty. Almost all had been early admitted into the most respectable society on an equal footing.

Johnson came among them the solitary specimen of a past age, the last survivor of the genuine race of Grub Street hacks; the last of that generation of authors whose abject misery and whose dissolute manners had furnished inexhaustible material to the satirical genius of Pope. From nature he had received an uncouth figure, a diseased constitution, and an irritable temper. The manner in which the earlier years of his manhood had been passed had given to his demeanor, and even to his moral character, some peculiarities appalling to the civilized beings who were the companions of his old age. The perverse irregularity of his hours, the slovenliness of his person, his fits of strenuous exertion, interrupted by long intervals of sluggishness, his strange abstinence and his equally strange voracity, his active

benevolence, contrasted with the constant rudeness and the occasional ferocity of his manners in society, made him, in the opinion of those with whom he lived during the last twenty years of his life, a complete original.

An original he was, undoubtedly, in some respects. But if we possessed full information concerning those who shared his early hardships, we should probably find that what we call his singularities of manner were, for the most part, failings which he had in common with the class to which he belonged. He ate at Streatham Park as he had been used to eat behind the screen at St. John's Gate, when he was ashamed to show his ragged clothes. He ate as it was natural that a man should eat, who, during a great part of his life, had passed the morning in doubt whether he should have food for the afternoon. The roughness and violence which he showed in society were to be expected from a man whose temper, not naturally gentle, had been long tried by the bitterest calamities, by the want of meat, of fire and of clothes, by the importunity of creditors, by the insolence of booksellers, by the derision of fools, by the insincerity of patrons, by that bread which is the bitterest of all food, by those stairs which are the most toilsome of all paths, by that deferred hope which makes the heart sick. Through all these things the ill-dressed, coarse, ungainly pedant had struggled manfully up to eminence and command.

It was natural that, in the exercise of his power, he should be *eo immitior, quia toleraverat* (more harsh toward others, because he had known what it was to suffer); that, though his heart was undoubtedly generous and humane, his demeanor in society should be

harsh and despotic. For severe distress he had sympathy, and not only sympathy, but munificent relief. But for the suffering which a harsh world inflicts upon a delicate mind he had no pity; for it was a kind of suffering which he could scarcely conceive.

He would carry home on his shoulders a sick and starving girl from the streets. He turned his house into a place of refuge for a crowd of wretched old creatures who could find no other asylum; nor could all their peevishness and ingratitude weary out his benevolence. But the pangs of wounded vanity seemed to him ridiculous; and he scarcely felt sufficient compassion even for the pangs of wounded affection. He had seen and felt so much of sharp misery, that he was not affected by paltry vexations; and he seemed to think that everybody ought to be as much hardened to those vexations as himself.

Though His Health was not Good.

He was angry with Boswell for complaining of a headache, with Mrs. Thrale for grumbling about the dust on the road, or the smell of the kitchen. These were, in his phrase, "foppish lamentations," which people ought to be ashamed to utter in a world so full of sin and sorrow. Goldsmith crying because the "Good-natured Man" had failed inspired him with no pity. Though his own health was not good, he detested and despised valetudinarians. Pecuniary losses,

unless they reduced the loser absolutely to beggary, moved him very little. People whose hearts had been softened by prosperity might weep, he said, for such events; but all that could be expected of a plain man was not to laugh. He was not much moved even by the spectacle of Lady Tavistock dying of a broken heart for the loss of her lord. Such grief he considered as a luxury reserved for the idle and the wealthy. A washerwoman, left a widow with nine small children, would not have sobbed herself to death.

A person who troubled himself so little about small or sentimental grievances was not likely to be very attentive to the feelings of others in the ordinary intercourse of society. He could not understand how a sarcasm or a reprimand could make any man really unhappy. "My dear doctor," said he to Goldsmith, "what harm does it do to a man to call him Holofernes?" "Pooh, ma'am," he exclaimed to Mrs. Carter, "who is the worse for being talked of uncharitably?"

Politeness has been well defined as benevolence in small things. Johnson was impolite, not because he wanted benevolence, but because small things appeared smaller to him than to people who had never known what it was to live on fourpence-half-penny a day.

The characteristic peculiarity of his intellect was the union of great powers with low prejudices. Johnson was in the habit of sifting with extreme severity the evidence for all stories which were merely odd. But when they were not only odd but miraculous, his severity relaxed. He began to be credulous precisely at the point where the most credulous people begin to

be sceptical. It is curious to observe, both in his writings and in his conversations, the contrast between the disdainful manner in which he rejects unauthenticated anecdotes, even when they are consistent with the general laws of nature, and the respectful manner in which he mentions the wildest stories relating to the invisible world.

A man who told him of a water-spout or a meteoric stone generally had the lie direct given him for his pains. A man who told him of a prediction or a dream wonderfully accomplished was sure of a courteous hearing. "Johnson," observed Hogarth, "like King David, says, in his haste, that all men are liars." "His incredulity," says Mrs. Thrale, "amounted almost to disease."

She tells us how he browbeat a gentleman who gave him an account of a hurricane in the West Indies, and a poor Quaker who related some strange circumstance about the red-hot balls fired at the siege of Gibraltar. "It is not so. It cannot be true. Don't tell that story again. You cannot think how poor a figure you make in telling it."

He once said, half jestingly, we suppose, that for six months he refused to credit the fact of the earthquake at Lisbon, and that he still believed the extent of the calamity to be greatly exaggerated. Yet he related with a grave face how old Mr. Cave, of St. John's Gate, saw a ghost and how this ghost was something of a shadowy being. He went himself on a ghost-hunt to Cock Lane, and was angry with John Wesley for not following up another scent of the same kind with proper spirit and perseverance. In his "Lives of the

Poets," we find that he is unwilling to give credit to the accounts of Lord Roscommon's early proficiency in his studies; but he tells with great solemnity an absurd romance about some intelligence preternaturally impressed on the mind of that nobleman. He vows himself to be in great doubt about the truth of the story, and ends by warning his readers not wholly to slight such impressions.

Many of his sentiments on religious subjects are worthy of a liberal and enlarged mind. He could discern clearly enough the folly and meanness of all bigotry except his own. When he spoke of the scruples of the Puritans, he spoke like a person who had really obtained an insight into the divine philosophy of the New Testament, and who considered Christianity as a noble scheme of government, tending to promote the happiness and to elevate the moral nature of man. The horror which the sectaries felt for cards, Christmas ale, plum-porridge, mince-pies, and dancing-bears, excited his contempt.

To the arguments urged by some very worthy people against showy dress he replied, with admirable sense and spirit, "Let us not be found, when our Master calls us, stripping the lace off our waistcoats, but the spirit of contention from our souls and tongues. Alas! sir, a man who cannot get to heaven in a green coat will not find his way thither the sooner in a gray one." . . . His mode of estimating the piety of his neighbors was somewhat singular. "Campbell," said he, "is a good man, a pious man. I am afraid he has not been in the inside of a church for many years; but he never passes a church without pulling off his hat: this shows he has

good principles." Spain and Sicily must surely contain many pious robbers and well-principled assassins.

Johnson could easily see that a Roundhead who named all his children after Solomon's singers, and talked in the House of Commons about seeking the Lord, might be an unprincipled villain whose religious mummeries only aggravated his guilt. But a man who took off his hat when he passed a church episcopally consecrated must be a good man, a pious man, a man of good principles.

Nobody spoke more contemptuously of the cant of patriotism. Nobody saw more clearly the error of those who regarded liberty, not as a means, but as an end, and who proposed to themselves, as the object of their pursuit, the prosperity of the State as distinct from the prosperity of the individuals who compose the State. His calm and settled opinion seems to have been that forms of government have little or no influence on the happiness of society. This opinion, erroneous as it is, ought at least to have preserved him from all intemperance on political questions. It did not, however, preserve him from the lowest, fiercest, and most absurd extravagances of party-spirit. He was, as a politician, half ice and half fire. On the side of his intellect he was far too apathetic about public affairs, far too sceptical as to the good or evil tendency of any form of polity. His passions, on the contrary, were violent even to slaying against all who leaned to Whiggish principles. The well-known lines which he inserted in Goldsmith's "Traveller" express what seems to have been his deliberate judgment:

> "How small, of all that human hearts endure,
> That part which kings or laws can cause or cure!"

He had previously put expressions very similar into the mouth of Rasselas. It is amusing to contrast these passages with the torrents of raving abuse which he poured forth against the Long Parliament and the American Congress. In one of the conversations reported by Boswell this inconsistency displays itself in the most ludicrous manner.

"Sir Adam Ferguson," says Boswell, "suggested that luxury corrupts a people, and destroys the spirit of liberty. JOHNSON: 'Sir, that is all visionary. I would not give half a guinea to live under one form of government rather than another. It is of no moment to the happiness of an individual. Sir, the danger of the abuse of power is nothing to a private man. What Frenchman is prevented passing his life as he pleases?' SIR ADAM: 'But, sir, in the British Constitution it is surely of importance to keep up a spirit in the people, so as to preserve a balance against the crown.' JOHNSON: 'Sir, I perceive you are a vile Whig. Why all this childish jealousy of the power of the crown? The crown has not power enough.'"

The judgments which Johnson passed on books were, in his own time, regarded with superstitious veneration, and in our time are generally treated with indiscriminate contempt. They are the judgments of a strong but enslaved understanding. The mind of the critic was hedged around by an uninterrupted fence of prejudices and superstitions. His whole code of criticism rested on pure assumption, for which he sometimes quoted a precedent or an authority, but rarely troubled himself to give a reason drawn from the nature of things. He took it for granted that the kind of poetry

which flourished in his own time, which he had been accustomed to hear praised from his childhood, and which he had himself written with success, was the best kind of poetry. In his biographical work he has repeatedly laid it down as an undeniable proposition that during the latter part of the seventeenth century, and the earlier part of the eighteenth, English poetry had been in a constant progress of improvement. Waller, Denham, Dryden, and Pope had been, according to him, the great reformers. He judged of all the works of the imagination by the standard established among his own contemporaries. Though he allowed Homer to have been a greater man than Virgil, he seems to have thought the "Æneid" a greater poem than the "Iliad." Indeed he well might have thought so; for he preferred Pope's "Iliad" to Homer's. He could see no merit in our fine old English ballads, and always spoke with the most provoking contempt of Percy's fondness for them. Of the great original works of imagination which appeared during his time, Richardson's novels alone excited his admiration. . . .

He was undoubtedly an excellent judge of compositions fashioned on his own principles. But when a deeper philosophy was required, when he undertook to pronounce judgment on the works of those great minds which "yield homage only to eternal laws," his failure was ignominious. But his observations on Shakespeare's plays and Milton's poems seem to us for the most part as wretched as if they had been written by Rymer himself, whom we take to have been the worst critic that ever lived.

Some of Johnson's whims on literary subjects can be

compared only to that strange nervous feeling which made him uneasy if he had not touched every post between the Mitre Tavern and his own lodgings. His preference of Latin epitaphs to English epitaphs is an instance. An English epitaph, he said, would disgrace Smollett. He declared that he would not pollute the walls of Westminster Abbey with an English epitaph on Goldsmith. What reason there can be for celebrating a British writer in Latin, which there was not for covering the Roman arches of triumph with Greek inscriptions, or for commemorating the deeds of the heroes of Thermopylæ in Egyptian hieroglyphics, we are utterly unable to imagine.

On men and manners, at least on the men and manners of a particular place and a particular age, Johnson had certainly looked with a most observant and discriminating eye. His remarks on the education of children, on marriage, on the economy of families, on the rules of society, are always striking, and generally sound. In his writings, indeed, the knowledge of life which he possessed in an eminent degree is very imperfectly exhibited. Like those unfortunate chiefs of the Middle Ages who were suffocated by their own chain-mail and cloth of gold, his maxims perish under that load of words which was designed for their defence and their ornament. But it is clear, from the remains of his conversation, that he had more of that homely wisdom which nothing but experience and observation can give than any writer since the time of Swift. If he had been content to write as he talked, he might have left books on the practical art of living superior to the "Directions to Servants."

Yet even his remarks on society, like his remarks on literature, indicate a mind at least as remarkable for narrowness as for strength. He was no master of the great science of human nature. He had studied, not the genus man, but the species Londoner. Nobody was ever so thoroughly conversant with all the forms of life and all the shades of moral and intellectual character which were to be seen from Islington to the Thames, and from Hyde Park corner to Mile-end green.

But his philosophy stopped at the first turn-pike gate. Of the rural life of England he knew nothing; and he took it for granted that everybody who lived in the country was either stupid or miserable. "Country gentlemen," said he, "must be unhappy; for they have not enough to keep their lives in motion;" as if all those peculiar habits and associations which made Fleet Street and Charing Cross the finest views in the world to himself had been essential parts of human nature.

Of remote countries and past times he talked with wild and ignorant presumption. "The Athenians of the age of Demosthenes," he said to Mrs. Thrale, "were a people of brutes, a barbarous people." In conversation with Sir Adam Ferguson he used similar language. "The boasted Athenians," he said, "were barbarians. The mass of every people must be barbarous where there is no printing."

The fact was this: he saw that a Londoner who could not read was a very stupid and brutal fellow: he saw that great refinement of taste and activity of intellect were rarely found in a Londoner who had not read much; and, because it was by means of books that people acquired almost all their knowledge in the soci-

ety with which he was acquainted, he concluded, in defiance of the strongest and clearest evidence, that the human mind can be cultivated by means of books alone.

An Athenian citizen might possess very few volumes; and the largest library to which he had access might be much less valuable than Johnson's bookcase in Bolt Court. But the Athenian might pass every morning in conversation with Socrates, and might hear Pericles speak four or five times every month. He saw the plays of Sophocles and Aristophanes: he walked amidst the friezes of Phidias and the paintings of Zeuxis: he knew by heart the choruses of Æschylus: he heard the rhapsodist at the corner of the street reciting the "Shield of Achilles" or the "Death of Argus": he was a legislator, conversant with high questions of alliance, revenue, and war: he was a soldier, trained under a liberal and generous discipline: he was a judge, compelled every day to weigh the effect of opposite arguments.

These things were in themselves an education, an education eminently fitted, not, indeed, to form exact or profound thinkers, but to give quickness to the perceptions, delicacy to the taste, fluency to the expression, and politeness to the manners. All this was overlooked. An Athenian who did not improve his mind by reading was, in Johnson's opinion, much such a person as a Cockney who made his mark, much such a person as black Frank before he went to school, and far inferior to a parish clerk or a printer's devil.

Johnson's friends have allowed that he carried to a ridiculous extreme his unjust contempt for foreigners.

He pronounced the French to be a very silly people, much behind us, stupid, ignorant creatures. And this judgment he formed after having been in Paris about a month, during which he would not talk French, for fear of giving the natives an advantage over him in conversation. He pronounced them, also, to be an indelicate people, because a French footman touched the sugar with his fingers. That ingenious and amusing traveller, M. Simond, has defended his countrymen very successfully against Johnson's accusation, and has pointed out some English practices which, to an impartial spectator, would seem at least as inconsistent with physical cleanliness and social decorum as those which Johnson so bitterly reprehended. To the sage, as Boswell loves to call him, it never occurred to doubt that there must be something eternally and immutably good in the usages to which he had been accustomed.

Johnson, as Mr. Burke most justly observed, appears far greater in Boswell's books than in his own. His conversation appears to have been quite equal to his writings in matter, and far superior to them in manner. When he talked, he clothed his wit and his sense in forcible and natural expressions. As soon as he took his pen in his hand to write for the public, his style became systematically vicious. All his books are written in a learned language — in a language which nobody hears from his mother or his nurse — in a language in which nobody ever quarrels, or drives bargains, or makes love — in a language in which nobody ever thinks.

It is clear that Johnson himself did not think in the dialect in which he wrote. The expressions which

came first to his tongue were simple, energetic, and picturesque. When he wrote for publication, he did his sentences out of English into Johnsonese. His letters from the Hebrides to Mrs. Thrale are the original of that work of which the "Journey to the Hebrides" is the translation; and it is amusing to compare the two versions.

"When we were taken up-stairs," says he in one of his letters, "a dirty fellow bounced out of the bed on which one of us was to lie." This incident is recorded in the *Journey* as follow: "Out of one of the beds on which we were to repose started up, at our entrance, a man black as a Cyclops from the forge."

Sometimes Johnson translated aloud. "'The Rehearsal,'" he said, very unjustly, "has not wit enough to keep it sweet;" then, after a pause, "it has not vitality enough to preserve it from putrefaction."

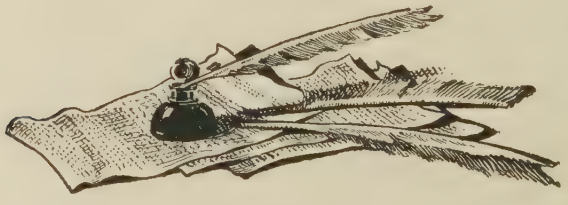
Mannerism is pardonable, and is sometimes even agreeable, when the manner, though vicious, is natural. Few readers, for example, would be willing to part with the mannerism of Milton or of Burke. But a mannerism which does not sit easy on the mannerist, which has been adopted on principle, and which can be sustained only by constant effort, is always offensive. And such is the mannerism of Johnson.

. . . . . .

As we close our article, the club-room is before us, and the table on which stands the omelet for Nugent, and the lemons for Johnson. There are assembled those heads which live forever on the canvas of Reynolds. There are the spectacles of Burke, and the tall, thin form of Langton; the courtly sneer of Beau-

clerk and the beaming smile of Garrick; Gibbon tapping his snuff-box, and Sir Joshua with his trumpet in his ear. In the foreground is that strange figure which is as familiar to us as the figures of those among whom we have been brought up, the gigantic body, the huge, massy face, seamed with the scars of disease, the brown coat, the black worsted stockings, the gray wig with the scorched foretop, the dirty hands, the nails bitten and pared to the quick. We see the eyes and mouth moving with convulsive twitches; we see the heavy form rolling; we hear it puffing; and then comes the "Why, sir!" and the "What then, sir?" and the "No, sir;" and the "You don't see your way through the question, sir!"

What a singular destiny has been that of this remarkable man! That kind of fame which is commonly the most transient is, in his case, the most durable. The reputation of those writings, which he probably expected to be immortal, is every day fading; while those peculiarities of manner and that careless table-talk, the memory of which, he probably thought, would die with him, are likely to be remembered as long as the English language is spoken in any quarter of the globe.



LINCOLN AS A LITERARY MAN[1]

By HAMILTON W. MABIE.

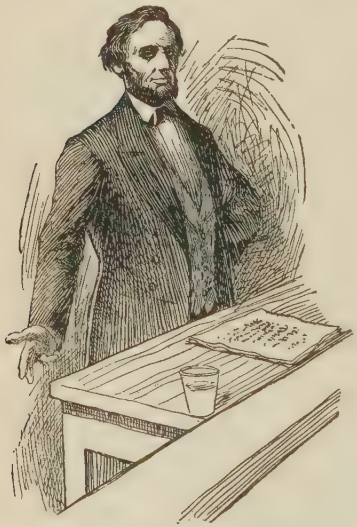
Abraham Lincoln.

BORN in 1809 and dying in 1865, Mr. Lincoln was the contemporary of every distinguished man of letters in America to the close of the war; but from none of them does he appear to have received literary impulse or guidance. He might have read, if circumstances had been favorable, a large part of the work of Irving, Bryant, Poe, Hawthorne, Emerson, Lowell, Whittier, Holmes, Longfellow, and Thoreau, as it came from the press; but he was entirely unfamiliar with it, apparently, until late in his career, and it is doubtful if even at that period he knew it well or cared greatly for it. He was singularly isolated by circumstances and by temperament from those influences which usually determine, within certain limits, the quality and character of a man's style.

[1] This article will be found in *The Library of the World's Best Literature*, edited by Mr. Charles Dudley Warner, Mr. Mabie, Mrs. L. G. Runkle, and Mr. George H. Warner, and published by Messrs. R. S. Peale and J. A. Hill (93 Fifth Ave., N. Y. City). 30 vols. Copyright, 1897.

And Mr. Lincoln had a style — a distinctive, individual, characteristic form of expression. In his own way he gained an insight into the structure of English, and a freedom and skill in the selection and combination of words, which not only made him the most convincing speaker of his time, but which have secured for his speeches a permanent place in literature.

One of those speeches is already known wherever the English language is spoken; it is a classic by virtue not only of its unique condensation of the sentiment of a tremendous struggle into the narrow compass of a few brief paragraphs, but by virtue of that instinctive felicity of style which gives to the largest thought the beauty of perfect simplicity.



Lincoln Making a Speech.

The two Inaugural Addresses are touched by the same deep feeling, the same large vision, the same clear, expressive, and persuasive eloquence; and these qualities are found in a great number of speeches, from Mr. Lincoln's first appearance in public life.

In his earliest expressions of his political views there is less range; but there is the structural order, clearness, sense of proportion, ease, and simplicity which give classic quality to the later utterances. Few speeches have so little of what is commonly regarded as oratorical quality; few have

approached so constantly the standards and character of literature.

While a group of men of gift and opportunity in the East were giving American literature its earliest direction, and putting the stamp of a high idealism on its thought, and a rare refinement of spirit on its form, this lonely, untrained man on the old frontier was slowly working his way through the hardest and rudest conditions to perhaps the foremost place in American history, and forming at the same time a style of singular and persuasive charm.

Schoolhouse where Lincoln Went to School.

There is, however, no possible excellence without adequate education; no possible mastery of any art without thorough training. Mr. Lincoln has sometimes been called an accident, and his literary gift an unaccountable play of nature; but few men have ever more definitely and persistently worked out what was in them by clear intelligence than Mr. Lincoln; and no speaker or writer of our time has, according to his opportunities, trained himself more thoroughly to the use of English prose.

Of educational opportunity in the scholastic sense, the future orator had only the slightest. He went to school "by littles," and these "littles" put together aggregated less than a year; but he discerned very early the practical use of knowledge, and set himself

to acquire it. This pursuit soon became a passion, and this deep and irresistible yearning did more for him, perhaps, than richer opportunities would have done. It made him a constant student, and it taught him the value of fragments of time.

"He was always at the head of his class," writes one of his schoolmates, "and passed us rapidly in his studies. He lost no time at home, and when he was not at work was at his books. He kept up his studies on Sunday, and carried his books with him to work, so that he might read when he rested from labor."

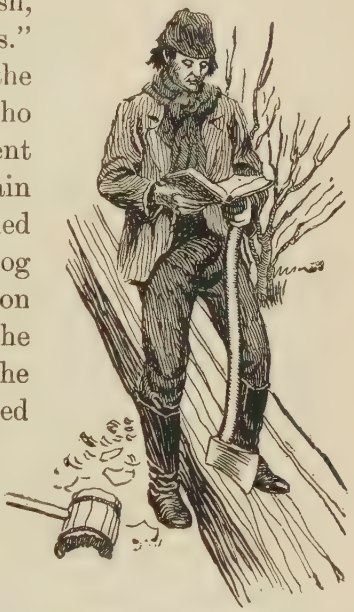
"I induced my husband to permit Abe to read and study at home as well as at school," writes his stepmother. "At first he was not easily reconciled to it, but finally he too seemed willing to encourage him to a certain extent. Abe was a dutiful son to me always, and we took particular care when he was reading not to disturb him — would let him read on and on until he quit of his own accord."

The books within his reach were few, but they were among the best. First and foremost was that collection of great literature in prose and verse, the Bible: a library of sixty-six volumes, presenting nearly every literary form, and translated at the fortunate moment when the English language had received the recent impress of its greatest masters of the speech of the imagination.

This literature Mr. Lincoln knew intimately, familiarly, fruitfully; as Shakespeare knew it in an earlier version, and as Tennyson knew it and was deeply influenced by it in the form in which it entered into and trained Lincoln's imagination. Then there was

Abraham Lincoln Studying at His Noon Meal.

that wise and very human text-book of the knowledge of character and life, "Æsop's Fables"; that masterpiece of clear presentation, "Robinson Crusoe"; and that classic of pure English, "The Pilgrim's Progress." These four books — in the hands of a meditative boy, who read until the last ember went out on the hearth, began again when the earliest light reached his bed in the loft of the log cabin, and perched himself on a stump, book in hand, at the end of every furrow in the ploughing season — contained the elements of a movable university.



Lincoln Reading.

To these must be added many volumes borrowed from more fortunate neighbors; for he had "read through every book he had heard of in that country, for a circuit of fifty miles." A history of the United States and a copy of Weems's "Life of Washington" laid the foundations of his political education. That he read with his imagination as well as with his eyes is clear from certain words spoken in the Senate chamber at Trenton in 1861: —

"May I be pardoned," said Mr. Lincoln, "if on this occasion I mention that way back in my childhood, the earliest days of my being able to read, I got hold of a small book, such a one as few of the members have

ever seen — Weems's 'Life of Washington.' I remember all the accounts there given of the battlefields and struggles for the liberties of the country; and none fixed themselves upon my imagination so deeply as the struggle here at Trenton, New Jersey. The crossing of the river, the contest with the Hessians, the great hardships endured at that time — all fixed themselves on my memory more than any single Revolutionary event; and you all know, for you have all been boys, how those early impressions last longer than any others."

"When Abe and I returned to the house from work," writes John Hanks, "he would go to the cupboard, snatch a piece of corn bread, sit down, take a book, cock his legs up as high as his head, and read. We grubbed, ploughed, weeded, and worked together barefooted in the field. Whenever Abe had a chance in the field while at work, or at the house, he would stop and read."

And this habit was kept up until Mr. Lincoln had found both his life-work and his individual expression. Later he devoured Shakespeare and Burns; and the poetry of these masters of the dramatic and lyric form, sprung like himself from the common soil, and like him self-trained and directed, furnished a kind of running accompaniment to his work and his play. What he read he not only held tenaciously, but took into his imagination and incorporated into himself. His familiar talk was enriched with frequent and striking illustrations from the Bible and "Æsop's Fables."

This passion for knowledge and for companionship with the great writers would have gone for nothing, so

far as the boy's training in expression was concerned, if he had contented himself with acquisition; but he turned everything to account. He was as eager for expression as for the material of expression; more eager to write and talk than to read. Bits of paper, stray sheets, even boards, served his purpose. He was continually transcribing with his own hand thoughts or phrases which had impressed him. Everything within reach bore evidence of his passion for reading, and for writing as well. The flat sides of logs, the surface of the broad wooden shovel, everything in his vicinity which could receive a legible mark, was covered with his figures and letters. He was studying expression quite as intelligently as he was searching for thought.

Scene at Lincoln's Early Home.

Years afterward, when asked how he had attained such extraordinary clearness of style, he recalled his early habit of retaining in his memory unfamiliar words or phrases overheard in ordinary conversation or met in books or newspapers, until night, meditating on them until he got at their meaning, and then translating them into his own simpler speech. This habit, kept up for years, was the best possible training for the writing of such English as one finds in the Bible and in "The Pilgrim's Progress." His self-education in the

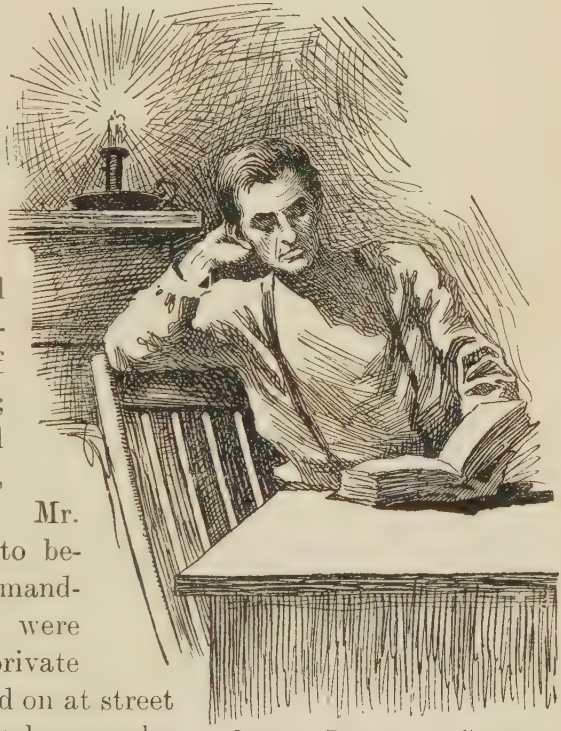
art of expression soon bore fruit in a local reputation both as a talker and a writer. His facility in rhyme and essay-writing was not only greatly admired by his fellows, but awakened great astonishment, because these arts were not taught in the neighboring schools.

In speech, too, he was already disclosing that command of the primary and universal elements of interest in human intercourse which was to make him, later, one of the most entertaining men of his time. His power of analyzing a subject so as to be able to present it to others with complete clearness was already disclosing itself. No matter how complex a question might be, he did not rest until he had reduced it to its simplest terms. When he had done this, he was not only eager to make it clear to others, but to give his presentation freshness, variety, attractiveness. He had, in a word, the literary sense.

"When he appeared in company," writes one of his early companions, "the boys would gather and cluster round him to hear him talk. Mr. Lincoln was figurative in his speech, talks, and conversation. He argued much from analogy, and explained things hard for us to understand by stories, maxims, tales and figures. He would almost always point his lesson or idea by some story that was plain and near to us, that we might instantly see the force and bearing of what he said."

In that phrase lies the secret of the closeness of Mr. Lincoln's words to his theme and to his listeners — one of the qualities of genuine, original expression. He fed himself with thought, and he trained himself in expression; but his supreme interest was in the men and

women about him, and later, in the great questions which agitated them. He was in his early manhood when society was profoundly moved by searching questions which could neither be silenced nor evaded; and his lot was cast in a section where, as a rule, people read little and talked much. Public speech was the instrumentality of political education and the most potent means of persuasion; but behind the platform, upon which Mr. Lincoln was to become a commanding figure, were countless private debates carried on at street corners, in hotel rooms, by the country road, in every place where men met even in the most casual way. In these wayside schools Mr. Lincoln practised the art of putting things until he became a past-master in debate, both formal and informal.



Lincoln Reading by Candle Light.

If all these circumstances, habits, and conditions are

studied in their entirety, it will be seen that Mr. Lincoln's style, so far as its formal qualities are concerned, is in no sense accidental or even surprising. He was all his early life in the way of doing precisely what he did with a skill which had become instinct in his later life. He was educated, in a very unusual way, to speak for his time and to his time with perfect sincerity and simplicity; to feel the moral bearing of the questions which were before the country; to discern the principles involved; and to apply the principles to the questions so as to clarify, illuminate, and persuade. There is little difficulty in accounting for the lucidity, simplicity, flexibility, and compass of Mr. Lincoln's style; it is not until we turn to its temperamental and spiritual qualities, to the soul of it, that we find ourselves perplexed and baffled.

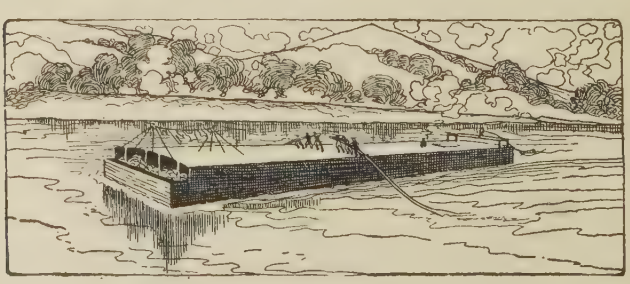
But Mr. Lincoln's possession of certain rare qualities is in no way more surprising than their possession by Shakespeare, Burns, and Whitman. We are constantly tempted to look for the sources of a man's power in his educational opportunities instead of in his temperament and inheritance. The springs of genius are purified and directed in their flow by the processes of training, but they are fed from deeper sources. The man of obscure ancestry and rude surroundings is often in closer touch with nature, and with those universal experiences which are the very stuff of literature, than the man who is born on the upper reaches of social position and opportunity. Mr. Lincoln's ancestry for at least two generations were pioneers and frontiersmen, who knew hardship and privation, and were immersed in that great wave of energy and life which

fertilized and humanized the central West. They were in touch with those original experiences out of which the higher evolution of civilization slowly rises; they knew the soil and the sky at first hand; they wrested a meagre subsistence out of the stubborn earth by constant toil; they shared to the full the vicissitudes and weariness of humanity at its elemental tasks.

It was to this nearness to the heart of a new country, perhaps, that Mr. Lincoln owed his intimate knowledge of his people, and his deep and beautiful sympathy with them. There was nothing sinuous or secondary in his processes of thought: they were broad, simple, and homely in the old sense of the word. He had rare gifts, but he was rooted deep in the soil of the life about him, and so completely in touch with it that he divined its secrets and used its speech. This vital sympathy gave his nature a deep and beautiful gentleness, and suffused his thought with a tenderness born of deep compassion and love. He carried the sorrows of his country as truly as he bore its burdens; and when he came to speak on the second immortal day at Gettysburg, he condensed in a few sentences the innermost meaning of the struggle and the victory in the life of the Nation. It was this deep heart of pity and love in him which carried him far beyond the reaches of statesmanship or oratory, and gave his words that finality of expression which marks the noblest art.

That there was a deep vein of poetry in Mr. Lincoln's nature is clear to one who reads the story of his early life; and this innate idealism, set in surroundings so harsh and rude, had something to do with his melancholy. The sadness which was mixed with his whole

life was, however, largely due to his temperament; in which the final tragedy seemed always to be predicted. In that temperament, too, is hidden the secret of the rare quality of nature and mind which suffused his public speech and turned so much of it into literature. There was humor in that speech, there was deep human sympathy, there was clear mastery of words for the use to which he put them; but there was something deeper and more pervasive — there was the quality of his temperament; and temperament is a large part of genius. The inner forces of his nature played through his thought; and when great occasions touched him to the quick, his whole nature shaped his speech and gave it a clear intelligence, deep feeling, and that beauty which is distilled out of the depths of the sorrows and hopes of the world. He was as unlike Burke and Webster, those masters of the eloquence of statesmanship, as Burns was unlike Milton and Tennyson. Like Burns, he held the key of the life of his people; and through him, as through Burns, that life found a voice, vibrating, pathetic, and beautiful beyond most voices of his time.



Flatboat.

SIR ISAAC NEWTON

By NATHANIEL HAWTHORNE.

Sir Isaac Newton.

ON Christmas day, in the year 1642, Isaac Newton was born at the small village of Woolsthorpe, in England. Little did his mother think, when she beheld her new-born babe, that he was destined to explain many matters which had been a mystery ever since the creation of the world.

Isaac's father being dead, Mrs. Newton was married again to a clergyman, and went to reside at North Witham. Her son was left to the care of his good old grandmother, who was very kind to him and sent him to school. In his early years Isaac did not appear to be a very bright scholar, but was chiefly remarkable for his ingenuity in all mechanical occupations. He had a set of little tools and saws of various sizes manufactured by himself. With the aid of these Isaac contrived to make many curious articles, at which he worked with so much skill that he seemed to have been born with a saw or chisel in hand.

The neighbors looked with vast admiration at the things which Isaac manufactured. And his old grandmother, I suppose, was never weary of talking about him.

"He'll make a capital workman one of these days," she would probably say. "No fear but that Isaac will do well in the world and be a rich man before he dies."

It is amusing to conjecture what were the anticipations of his grandmother and the neighbors about Isaac's future life. Some of them, perhaps, fancied that he would make beautiful furniture of mahogany, rosewood, or polished oak, inlaid with ivory and ebony and magnificently gilded. And then, doubtless, all the rich people would purchase these fine things to adorn their drawing rooms. Others probably thought that little Isaac was destined to be an architect, and would build splendid mansions for the nobility and gentry, and churches too, with the tallest steeples that had ever been seen in England.

Some of his friends, no doubt, advised Isaac's grandmother to apprentice him to a clockmaker; for, besides his mechanical skill, the boy seemed to have a taste for mathematics, which would be very useful to him in that profession. And then, in due time, Isaac would set up for himself, and would manufacture curious clocks, like those that contain sets of dancing figures, which issue from the dial-plate when the hour is struck; or like those where a ship sails across the face of the clock, and is seen tossing up and down on the waves as often as the pendulum vibrates.

Indeed, there was some ground for supposing that Isaac would devote himself to the manufacture of

clocks; since he had already made one, of a kind which nobody had ever heard of before. It was set a-going, not by wheels and weights like other clocks, but by the dropping of water. This was an object of great wonderment to all the people round about, and it must be confessed that there are few boys, or men either, who could contrive to tell what o'clock it is by means of a bowl of water.

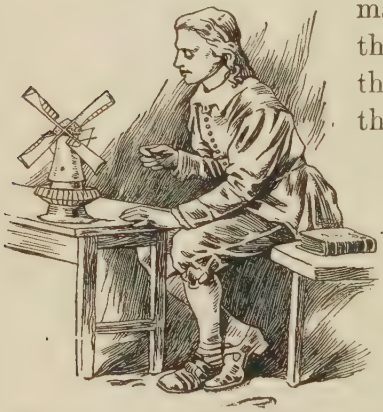
Besides the water clock, Isaac made a sun-dial. Thus his grandmother was never at a loss to know the hour; for the water clock would tell it in the shade, and the dial in the sunshine. The sun-dial is said to be still in existence at Woolsthorpe, on the corner of the house where Isaac dwelt. If so, it must have marked the passage of every sunny hour that has elapsed since Isaac Newton was a boy. It marked all the famous moments of his life; it marked the hour of his death; and still the sunshine creeps slowly over it, as regularly as when Isaac first set it up.

Yet we must not say that the sun-dial has lasted longer than its maker; for Isaac Newton will exist long after the dial — yea, and long after the sun itself — shall have crumbled to decay.

Isaac possessed a wonderful faculty of acquiring knowledge by the simplest means. For instance, what method do you suppose he took to find out the strength of the wind? You will never guess how the boy could compel that unseen, inconstant, and ungovernable wonder, the wind, to tell him the measure of his strength. Yet nothing could be more simple. He jumped against the wind; and by the length of his jump he could calculate the force of a gentle breeze, a brisk gale, or a

tempest. Thus, even in his boyish sports, he was continually searching out the secrets of philosophy.

Not far from his grandmother's residence there was a windmill which operated on a new plan. Isaac was in the habit of going thither frequently, and would spend whole hours in examining its various parts. While the mill was at rest he pried into its internal machinery. When its broad sails were set in motion by the wind he watched the process by which the mill stones were made to revolve and crush the grain that was put into the hopper. After gaining a thorough knowledge of its construction he was observed to be unusually busy with his tools.



He had Constructed a Model of the Windmill.

It was not long before his grandmother and all the neighborhood knew what Isaac had been about. He had constructed a model of the windmill. Though not so large, I suppose, as one of the box traps which boys set to catch squirrels, yet every part of the mill and its machinery was complete. Its little sails were neatly made of linen, and whirled round very swiftly when the mill was placed in a draught of air. Even a puff of wind from Isaac's mouth or from a pair of bellows was sufficient to set the sails in motion. And what was most curious, if a handful of grains of wheat was put into the little hopper, they would soon be converted into snow-white flour.

Isaac's playmates were enchanted with his new windmill. They thought that nothing so pretty and so wonderful had ever been seen in the whole world.

"But, Isaac," said one of them, "you have forgotten one thing that belongs to a mill."

"What is that?" asked Isaac; for he supposed, that, from the roof of the mill to its foundation, he had forgotten nothing.

"Why, where is the miller?" said his friend.

"That is true — I must look out for one," said Isaac; and he set himself to consider how the deficiency should be supplied.

He might easily have made the miniature figure of a man; but then it would not have been able to move about and perform the duties of a miller. As Captain Lemuel Gulliver had not yet discovered the Island of Liliput, Isaac did not know that there were little men in the world whose size was just suited to his windmill. It so happened, however, that a mouse had just been caught in the trap; and, as no other miller could be found, Mr. Mouse was appointed to that important office. The new miller made a very respectable appearance in his dark-gray coat. To be sure, he had not a very good character for honesty, and was suspected of sometimes stealing a portion of the grain which was given him to grind. But perhaps some two-legged millers are quite as dishonest as this small quadruped.

As Isaac grew older, it was found that he had far more important matters in his mind than the manufacture of toys like the little windmill. All day long, if left to himself, he was either absorbed in thought

or engaged in some book of mathematics or natural philosophy. At night, I think it probable, he looked up with reverential curiosity to the stars, and wondered whether they were worlds like our own, and how great was their distance from the earth, and what was the power that kept them in their courses. Perhaps, even so early in life, Isaac Newton felt a presentiment that he should be able, hereafter, to answer all these questions.

When Isaac was fourteen years old, his mother's second husband being now dead, she wished her son to leave school and assist her in managing the farm at Woolsthorpe. For a year or two, therefore, he tried to turn his attention to farming. But his mind was so bent on becoming a scholar that his mother sent him back to school, and afterwards to the University of Cambridge.

I have now finished my anecdotes of Isaac Newton's boyhood. My story would be far too long were I to mention all the splendid discoveries which he made after he came to be a man. He was the first that found out the nature of light; for, before his day, nobody could tell what the sunshine was composed of. You remember, I suppose, the story of an apple's falling on his head, and thus leading him to discover the force of gravitation, which keeps the heavenly bodies in their courses. When he had once got hold of this idea, he never permitted his mind to rest until he had searched out all the laws by which the planets are guided through the sky. This he did as thoroughly as if he had gone up among the stars and tracked them in their orbits. The boy had found

out the mechanism of a windmill; the man explained to his fellow-men the mechanism of the universe.

While making these researches he was accustomed to spend night after night in a lofty tower, gazing at the heavenly bodies through a telescope. His mind was lifted far above the things of this world. He may be said, indeed, to have spent the greater part of his life in worlds that lie thousands and millions of miles away; for where the thoughts and the heart are, there is our true existence.

Night After Night in a Lofty Tower.

Did you ever hear the story of Newton and his little dog Diamond? One day, when he was fifty years old, and had been hard at work more than twenty years studying the theory of light, he went out of his chamber, leaving his little dog asleep before the fire. On the table lay a heap of manuscript papers, containing all the discoveries which Newton had made during those twenty years. When his master was gone, up rose little Diamond, jumped upon the table, and overthrew the lighted candle. The papers immediately caught fire.

Just as the destruction was completed Newton opened the chamber door, and perceived that the labors of twenty years were reduced to a heap of ashes.

There stood little Diamond, the author of all the mischief. Almost any other man would have sentenced the dog to immediate death. But Newton patted him on the head with his usual kindness, although grief was at his heart.

"O Diamond, Diamond," exclaimed he, "thou little knowest the mischief thou hast done!"

This incident affected his health and spirits for some time afterwards; but, from his conduct towards the little dog, you may judge what was the sweetness of his temper.

Newton lived to be a very old man, and acquired great renown, and was made a member of parliament, and received the honor of knighthood from the king. But he cared little for earthly fame and honors, and felt no pride in the vastness of his knowledge. All that he had learned only made him feel how little he knew in comparison to what remained to be known.

"I seem to myself like a child," observed he, "playing on the sea-shore, and picking up here and there a curious shell or a pretty pebble, while the boundless ocean of Truth lies undiscovered before me."

At last, in 1727, when he was fourscore and five years old, Sir Isaac Newton died — or rather he ceased to live on earth. We may be permitted to believe that he is still searching out the infinite wisdom and goodness of the Creator as earnestly, and with even more success than while his spirit animated a mortal body. He has left a fame behind him which will be as endurable as if his name were written in letters of light formed by the stars upon the midnight sky.

BERNARD PALISSY THE POTTER[1]

By EDWARD EVERETT HALE.

Bernard Palissy.

BERNARD PALISSY was born, about 1510, in the little town of Biron, in Périgord, France. He became not only a great artist, but a learned physician, and a writer of merit.

Born of poor parents of the working-class, he had to learn some trade, and early applied himself to working glass, not as a glazier, but staining it and cutting it up in little bits, to be joined together with lead for the colored windows so much used in churches. This was purely mechanical work; but Bernard's ambition led him to study drawing and color, that he might himself design and execute, in glass, scenes from the Bible and lives of the saints, such as he saw done by his superiors.

When he was old enough, curious to see the world

[1] From "Stories of Invention," copyrighted 1885, by permission of the publishers, Little, Brown & Company, Boston.

and learn new things, he took a journey on foot through several provinces of France, by observation thus supplying the defects of his early education, and reaping a rich harvest of facts and ideas, which developed the qualities of his intelligence.

It was at this time that the Renaissance in Art was making itself felt throughout Europe. Francis I. of France encouraged all forms of good work by his patronage; and wherever he went the young Palissy was animated and inspired by the sight of beautiful things.

Faïence, an elegant kind of pottery, attracted his attention. This appeared first in the fourteenth century. The Arabs had long known the art of making tiles of clay, enamelled and richly ornamented. They brought it into Spain, as is shown in the decorations of the Alhambra at Seville and elsewhere. Lucca della Robbia in Italy first brought the art to perfection, by making figures and groups of figures in high relief, of baked clay covered with shining enamel, white, tinted with various colors. The kind of work called *majolica* differed from the earlier faïence by some changes in the material used for the enamel. In the middle of the sixteenth century remarkable historical paintings were executed in faïence, upon huge *plaques*. All the cities of Italy vied with each other in producing wonders in this sort of work; it is from one of them, Faenza, that it takes its name. The method of making the enamel was a deep secret; but Bernard Palissy, with long patience and after many failures, succeeded in discovering it, — or, rather, in inventing for himself a new method, which in some respects excelled the old.

Palissy was the author of several essays, or "Discourses"; and from one of these, written in quaint old French, we have his own account of his invention.

He married and settled down in the year 1539 with a good income from his intelligent industry. He had a pleasant little house in the country, where, as he says, "I could rejoice in the sight of green hills, where were feeding and gambolling lambs, sheep and goats."

An incident, apparently slight, disturbed this placid domestic happiness. He came across a cup of enamelled pottery, doubtless from Italy. "This cup," he says, "was of such beauty, that, from the moment I saw it, I entered into a dispute with myself as to how it could have been made."

Enamel is nothing more than a kind of glaze colored with metallic acids, and rendered opaque by the mixture of a certain quantity of tin. It is usually spread upon metal, when only it is properly called enamel; but this glaze can also be put upon earthenware. It makes vessels water-tight, and gives them brilliancy of surface. To find out how to do this was to make a revolution in the keramic art.

In France, in the sixteenth century, the only vessels, such as jugs or vases, were made either of metal, wood, or coarse porous pottery, through which water could penetrate — like the goulehs of the Arabs, or the cantaras of the Moors, which are still used for fresh water to advantage, since the evaporation of the drops keeps the water cold.

Many attempts had been made to imitate the beautiful and costly vases of China; but no one succeeded until the potters of Italy found out how to make faïence.

The discovery was hailed as a most valuable one. The princes who owned the works guarded their secret with jealous care, — to betray it would have been punished by death; so that Bernard Palissy had no hope of being taught how it was done, even if he should go to the places in Italy where the work was carried on.

"But," he says, "what others had found out, I might also discover; and if I could once make myself master of the art of glazing, I felt sure I could elevate pottery to a degree of perfection as yet unknown. What a glory for my name, what a benefit to France, if I could establish this industry here in my own land!"

He turned and turned the cup in his fingers, admiring the brilliant surface. "Yes," he said at last, "it shall be so, for I choose! I have already studied the subject. I will work still harder, and reach my aim at last."

Exceptional determination of character was needed for such an object. Palissy knew nothing about the component parts of enamels; he had never even seen the process of baking clay, and he had to begin with the very simplest investigations. To study the different kinds of earth and clay, to acquire the arts of moulding and turning, and to gain some knowledge of chemistry, all these were necessary. But he did not flinch, and pursued his idea with indomitable perseverance.

"Moving only by chance," he says, "like a man groping in the dark, I made a collection of all the different substances which seemed at all likely to make enamel, and I pounded them up fine; then I bought earthen pots, broke them into small bits, numbered

these pieces, and spread over each of them a different combination of materials. Now I had to have a furnace in which to bake my experiments. I had no idea how furnaces were usually made; so I invented one of my own, and set it up. But I had no idea how much heat was required to melt enamels, — perhaps I heated my furnace too much, perhaps not enough; sometimes my ingredients were all burned up, sometimes they melted not at all; or else some were turned to coal, while others remained undisturbed by the action of the fire."

Meanwhile the resources of the unlucky workman were fast diminishing; for he had abandoned his usual work, by which he earned his living, and kept making new furnaces, "with great expense and trouble, and a great consumption of time and firewood."

This state of affairs much displeased his wife, who complained bitterly, and tried to divert her husband from an occupation which earned for him nothing but disappointment. The cheerful little household changed its aspect; the children were no longer well-dressed, and the shabby furniture and empty cupboards betrayed the decay which was falling upon the family. The father saw with profound grief the wants of his household; but success seemed ever so near to him, that he could not bear to give it up. His hope at that time was but a mirage; and for long afterwards, in this struggle between intelligence and the antagonism of material things, ill fortune kept the upper hand.

One day, tired out by his failures, it occurred to him that a man brought up to baking pottery would know how to bake his specimens better than he could.

"I covered three or four hundred bits of broken vase with different compounds, and sent them to a *fabrique* about a mile and a half from my house. The potters consented to put my patterns with their batch for the oven. Full of impatience, I awaited the result of this experiment. I was on hand when my specimens came out. I looked them anxiously all over; not one was successful!

"The heat had not been strong enough, but I did not know this; I saw only one more useless expense of money. One of the workmen came to me and said, 'You will never make anything out of this; you had better go back to your own business.'"

Palissy shook his head; he had still in his possession some few valuable articles, souvenirs of happier days, which he could sell to renew his experiments. In spite of the reproaches of his wife, he bought more ingredients and more earthenware, and made new combinations.

Failure again! However, he would not be beaten. Some friends lent him a little money; he sat up at night to make new mixtures of different substances, all prepared with such care that he felt sure some of them must be good. Then he carried them again to the potters, whom he urged to the greatest care. They only shrugged their shoulders, and called him "crack brain"; and when the batch was done, they brought the results to Palissy with jeers. Some of the pieces were dirty white; others green, red, or smoked by the fire; but all alike in being dull and worthless.

It was over. Discouragement took possession of Palissy. "I returned home," he says, "full of confusion and sadness. Others might seek the secret of enamels.

I must set to work and earn money to pay my debts and get bread for the family."

Most luckily for him at this time, a task was given him by government, for which he was well suited, and which brought him good pay. The king, Francis I., having had, like many another sovereign, some difficulty with his faithful subjects in the matter of imposts, now found it necessary to make a new regulation of taxes; and for this, among other things, an inspection of the salt marshes on the coasts of France was needed, in order to name the right sums for taxation, and a knowledge of arithmetic was required as well. Palissy was appointed; and to the great delight of his family, who thought that his mind would now be forever diverted from the search for enamel, he set forth to explore the islands and the shores of France. He drew admirable outlines of the forms of the salt marshes, and wrote with eloquence upon the sublimity of the sea.

Ease and comfort came back. His task was ended; but debts were paid, and plenty of money remained.

The first thing he saw on returning home, alas! was the cup, — his joy and despair. "How beautiful it is! how brilliant!" he exclaimed; and once more he threw himself into the pursuit of the elusive enamel.

It was easy to see that the so much admired faïence of Italy was simply common baked clay, covered with some substance glazed by heat, but so composed as to adhere to the surface after it had cooled. But what substance? He had tried all sorts of material; why had none of them melted? Palissy at length decided that the fault had been in using the common potter's furnace. Since the materials were to be vitrified by

the process, they should be baked like glass. He broke up three dozen pots, pounded up a great quantity of different ingredients, and spread them with a brush on the fragments; then he carried them to the nearest glass-works. He was allowed to superintend the baking himself; he put the specimens in the oven, and passed the night attending the fire. In the morning he took them out. "Oh, joy! Some of the compounds had begun to melt; there was no perfect glaze, only a sign that I was on the right road."

It was, however, still a long and weary one. After two more years, Palissy was still far from the discovery of enamelling, but during this time he was acquiring much knowledge. From a simple workman he had become a learned chemist. He says himself, "The mistakes I made in combining my enamels taught me more than the things which came right of themselves."

There came a time, which he had once more resolved should be the last, when he repaired to the glass-works, accompanied by a man loaded with more than three hundred different patterns on bits of pottery. For four hours Bernard gloomily watched the progress of baking. Suddenly he started in surprise. Did his eyes deceive him? No! it was no illusion. One of the pieces in the furnace was covered with a brilliant glazing, white, polished, excellent. Palissy's joy was immense. "I thought I had become a new creature," he says. "The enamel was found; France enriched by a new discovery."

Palissy now hastened to undertake a whole vase. For many and large pieces there was not room enough at his disposition in the ovens of the glass-works. He

did not worry about that, for he was quite sure he could construct one of his own. He decided, too, at once to model and fashion his own vases; for those which he bought of the potters, made of coarse and heavy forms, no longer suited his ambition. He now designed forms, turned and modelled them himself. Thus passed seven or eight months. At last his vases were done, and he admired with pride the pure forms given to the clay by his hands. But his money was giving out again, and his furnace was not yet built. As he had nothing to pay for the work, he did all the work himself, — went after bricks and brought them himself on his back, and then built and plastered with his own hands. The neighbors looked on in pity and ridicule. "Look," they said, "at Master Bernard! He might live at his ease, and yet he makes a beast of burden of himself!"

Palissy minded their sarcasms not at all. His furnace was finished in good time, and the first baking of the clay succeeded perfectly. Now the pottery was to be covered with his new enamel. Time pressed, for in a few days there would be no more bread in the house for his children. For a long time he had been living on credit, but now the butcher and baker refused to furnish anything more. All about him he saw only unfriendly faces; every one treated him as a fool. "Let him die of hunger," they said, "since he will not listen to reason."

His wife was the worst of all. She failed to see any heroism in the obstinacy or perseverance of her husband, — no wonder, perhaps, with the sight of her suffering children before her eyes. She went about

reciting her misfortunes to all the neighborhood, very unwisely, as she thus ruined the credit of her husband, his last and only resource.

Palissy was already worn out by so much manual labor, to which he was little accustomed; nevertheless, he worked by night, and all night long, to pound up and prepare the materials for his white enamel, and to spread it upon his vases. A report went abroad, caused by the sight of his lamp constantly burning, that he was trying to coin counterfeit money. He was suspected, despised, and avoided, and went about the streets hanging his head because he had no answer to make to his accusers.

The moment which was to decide his life arrived. The vases were placed in the furnace, and for six continuous days and nights he plied the glowing fire with fuel. The heat was intolerable; but the enamel resisted, nothing would melt, and he was forced to recognize that there was too little of the glazing substance in the combination to vitrify the others. He set to work to mix another compound, but his vases were spoiled; he borrowed a few common ones from the pottery. During all this delay he did not dare to let the fire go out, it would take so much wood to start it again. Once more the newly-covered pots were placed in the intense furnace; in three or four hours the test would be completed. Palissy perceived with terror that his fuel was giving out. He ran to his garden, tore up fences, and cut down trees which he had planted himself, and threw all these into the two yawning mouths of the furnace. Not enough! He went into the house and seized tables, chairs, and bureaus; but the house

was but poorly furnished, and contained but little to feed the flames. Palissy returned. The rooms were empty, there was absolutely nothing more to take; then he fell to pulling up the planks of the floor. His wife, frightened to death, stood still and let him go on. The neighbors ran in, at the sound of the axe, and said, "He must be a fool!"

But soon pity changed to admiration. When Palissy took the vases from the furnace, the common pots which all had seen before dull and coarse, were of a clear, pearly white, covered with brilliant polish.

So much emotion and fatigue had told upon the robust constitution of Palissy. "I was," he says, "all used up and dried up on account of such toil, and the heat of the furnace. It was more than a month since I had had a dry shirt on my body, and I felt as if I had reached the door of the sepulchre."

In spite of the success which he had now attained, our potter had by no means reached the end of his misfortunes. He sold his vases, but could not get much for them, as there were but a few, of poor shapes; for those which he had modelled himself had all failed to take the enamel, and the successful ones were only common things, bought on credit. The small sum which he got by selling them was not enough by any means to cover his expenses, pay his debts, and restore order to the house from which pretty much everything was burned up for firewood in his furnace.

However, he was supported and happy in the thought of his success. He said to himself: "Why be sad, when you have found what you were seeking for? Go on working, and you will put your enemies to shame."

Once more he succeeded in borrowing a little money. He hired a man to help him; and for want of funds he paid this man by giving him all his own good clothes, while he went himself in rags. The furnace he had made was coming to pieces on account of the intense heat he had maintained in it for six days and nights during his last experiment. He pulled it to pieces with his own hands, working with fingers bleeding and bound up in bandages. Then he fetched water, sand, lime, and stone, and built by himself a new furnace, "without any help or any repose. A feverish resolution doubled my strength, and made me capable of doing things which I should have imagined impossible."

This time the oven heats admirably, the enamels appear to be melting. Palissy goes to rest, and dreams of his new vases, which must bring enough to pay all his debts; his impatient creditors come in the morning to see the things taken from the furnace. Palissy receives them joyfully; he would like to invite the whole town.

When the pieces came out of the oven, they were shining and beautiful; but — always but; — an accident had deprived them of all value. Little stones, which formed a part of the mortar with which the furnace was built, had burst with the heat, and spattered the enamel all over with sharp fragments cutting like a razor, entirely spoiling it of course. Still the vases were so lovely in form, and the glaze was so beautiful, that several people offered to buy them if they could have them cheap. This the proud potter would not bear. Seizing the vases, he dashed them to the ground; then utterly worn out, he went into the house and threw himself on the bed. His wife followed him, and covered him with reproaches

for thus wasting the chance of making a few francs for the family. Soon he recovered his elasticity, reflecting "that a man who has tumbled into a ditch has but one duty, and that is to try to get out of it."

He now set to work at his old business of painting upon glass, and after several months had earned enough to start another batch of vases. Of these, two or three were successful and sold to advantage; the rest were spoiled by ashes which fell upon the enamel in the furnace while it was soft. He therefore invented what he called a "lantern" of baked clay, to put over the vases to protect them in baking. This expedient proved so good that it is still used.

The enamel once discovered, it would be supposed that all trouble was over; but it is not enough to invent a process, — to carry it out all sorts of little things have to be considered, the least of which if not attended to, may spoil all the rest. These multiplied accidents, with all the privations and sufferings he had undergone, were attacking the health of Palissy. He says in his simple style, —

"I was so used up in my person, that there was no shape or appearance of curve on my arms or legs; my so-called legs, indeed, were but a straight line, so that when I had gartered my stockings, as soon as I began to walk, they were down on my heels."

His enamelled pottery now began to make a living for its inventor, but so poor a living that many things were wanting, — for instance a suitable workshop. For five or six years he carried on the work in the open air; either heat, rain or cold spoiled many of his vases, while he himself, exposed to the weather, "passed whole nights at

the mercy of rain and cold, without any aid, comfort, or companionship except that of owls screeching on one side, and dogs howling on the other. Sometimes," he continues, " winds and tempests blew with such violence inside and outside of my ovens, that I was obliged to leave, with a total loss of all they contained. Several times when I had thus left everything without a dry rag upon me on account of the rain, I came in at midnight or daybreak without any light, staggering like a drunken man, all broken down at the thought of my wasted toil; and then all wet and dirty as I was, I found in my bedroom the worst affliction of all, which makes me wonder now why I was not consumed by grief." He means the scolding and reproaches of his wife.

But the time came when his perseverance was rewarded, and his pottery brought him the fame and money he deserved. He was able to make new experiments, and add to the value of his discovery. Having obtained the white enamel, he had the idea of tinting it with all sorts of colors, which he did successfully. He then began to decorate his faïence with objects modelled from nature, such as animals, shells, leaves, and branches. Lizards of a bright emerald color, with pointed heads and slender tails, and snakes gliding between stones or curled upon a bank of moss, crabs, frogs, and spiders, all of their natural colors, and disposed in the midst of plants equally well imitated, are the characteristic details of the work of Palissy.

These perfect imitations of Nature were taken actually from Nature herself. Palissy prepared a group of real leaves and stones, putting the little insects or animals he wished to represent in natural attitudes amongst

them. He fastened these reptiles, fishes, or insects in their places by fine threads, and then made a mould of the whole in plaster of Paris. When it was done, he removed the little animals from the mould so carefully that he could use them over and over again.

Thus, after sixteen years passed in untiring energy, sixteen years of anxiety and privation, the artist triumphed over all the obstacles opposed to his genius. The humble potter, despised of all, became the most important man in his town. His productions were sought for eagerly, and his reputation established forever.

His life henceforth was not free from events, but these were not connected with his invention. His fame came to the knowledge of the queen mother Catherine de' Medicis; for Francis I. was no longer living, and Charles IX. had succeeded Francis II. upon the throne. He was summoned to Court, and employed to build grottos, decorated with his designs, by personages of distinction, — one especially for the queen herself, which he describes in his Discourse of the "Jardin Delectable."

He was in Paris at the time of the terrible massacre of St. Bartholomew, where, as he was a Huguenot, he would doubtless have perished but for the protection of the queen, who helped him to escape with his family.

Later, however, in the midst of the troubles and terrors of the time, he was thrown into the Bastille; and there he died, an old man of eighty years.

WILLIAM SHAKESPEARE

By RALPH WALDO EMERSON.

William Shakespeare.

GREAT men are more distinguished by range and extent, than by originality. If we require the originality which consists in weaving, like a spider, their web from their own bowels; in finding clay and making bricks, and building the house, no great menare original. Nor does valuable originality consist in unlikeness to other men. The hero is in the press of knights, and the thick of events; and, seeing what men want, and sharing their desire, he adds the needful length of sight and of arm, to come at the desired point. The greatest genius is the most indebted man.

A poet is no rattlebrain, saying what comes uppermost, and, because he says everything, saying, at last, something good; but a heart in unison with his time and country. There is nothing whimsical and fantastic in his production, but sweet and sad earnest, freighted with the weightiest convictions, and pointed with the most determined aim which any man or class knows of in his times.

The Genius of our life is jealous of individuals, and will not have any individual great, except through the general. There is no choice to genius. A great man does not wake up on some fine morning, and say, "I am full of life, I will go to sea, and find an Antarctic continent: to-day I will square the circle: I will ransack botany, and find a new food for man: I have a new architecture in my mind: I foresee a new mechanic power." No, but he finds himself in the river of the thoughts and events, forced onward by the ideas and necessities of his contemporaries. He stands where all the eyes of men look one way, and their hands all point in the direction in which he should go. The church has reared him amidst rites and pomps, and he carries out the advice which her music gave him, and builds a cathedral needed by her chants and processions. He finds a war raging: it educates him by trumpet, in barracks, and he betters the instruction. He finds two counties groping to bring coal, or flour, or fish, from the place of production to the place of consumption, and he hits on a railroad.

Every master has found his materials collected, and his power lay in his sympathy with his people, and in his love of the materials he wrought in. What an economy of power! and what a compensation for the shortness of life! All is done to his hand. The world has brought him thus far on his way. The human race has gone out before him, sunk the hills, filled the hollows, and bridged the rivers. Men, nations, poets, artisans, women, all have worked for him, and he enters into their labors. Choose any other thing, out of the line of tendency, out of the national feeling and

history, and he would have all to do for himself: his powers would be expended in the first preparations. Great genial power, one would almost say, consists in not being original at all; in being altogether receptive; in letting the world do all, and suffering the spirit of the hour to pass unobstructed through the mind.

Shakespeare's youth fell in a time when the English people were importunate for dramatic entertainments. The court took offence easily at political allusions,

Birthplace of Shakespeare.

and attempted to suppress them. The Puritans, a growing and energetic party, and the religious among the Anglican church, would suppress them. But the people wanted them. Inn-yards, houses without roofs, and extemporaneous enclosures at country fairs, were the ready theatres of strolling players. The people had tasted this new joy; and, as we could not hope to suppress newspapers now, — no, not by the strongest party, — neither then could king, prelate, or puritan,

alone or united, suppress an organ, which was ballad, epic, newspaper, caucus, lecture, punch, and library, at the same time. Probably king, prelate, and puritan, all found their own account in it. It had become, by all causes, a national interest, — by no means conspicuous, so that some great scholar would have thought of treating it in an English history, — but not a whit less considerable, because it was cheap, and of no account, like a baker's-shop. The best proof of its vitality is the crowd of writers which suddenly broke into this field; Kyd, Marlow, Greene, Jonson, Chapman, Dekker, Webster, Heywood, Middleton, Peele, Ford, Massinger, Beaumont, and Fletcher.

The secure possession, by the stage, of the public mind, is of the first importance to the poet who works for it. He loses no time in idle experiments. Here is audience and expectation prepared. In the case of Shakespeare there is much more. At the time when he left Stratford, and went up to London, a great body of stage-plays, of all dates and writers, existed in manuscript, and were in turn produced on the boards. Here is the Tale of Troy, which the audience will bear hearing some part of every week; the Death of Julius Cæsar, and other stories out of "Plutarch," which they never tire of; a shelf full of English history, from the chronicles of Brut and Arthur down to the royal Henries, which men hear eagerly; and a string of doleful tragedies, merry Italian tales, and Spanish voyages, which all the London 'prentices know. All the mass has been treated, with more or less skill, by every playwright, and the prompter has the soiled and tattered manuscripts. It is now no longer possible

to say who wrote them first. They have been the property of the theatre so long, and so many rising geniuses have enlarged or altered them, inserting a speech, or a whole scene, or adding a song, that no man can any longer claim copyright on this work of numbers. Happily, no man wishes to. They are not yet desired in that way. We have few readers, many spectators and hearers. They had best lie where they are.

Shakespeare, in common with his comrades, esteemed the mass of old plays, waste stock, in which any experiment could be freely tried. Had the *prestige* which hedges about a modern tragedy existed, nothing could have been done. The rude warm blood of the living England circulated in the play, as in street ballads, and gave body which he wanted to his airy and majestic fancy. The poet needs a ground in popular tradition on which he may work, and which, again may restrain his art within the due temperance. It holds him to the people, supplies a foundation for his edifice; and, in furnishing so much work done to his hand, leaves him at leisure, and in full strength for the audacities of his imagination. In short, the poet owes to his legend what sculpture owed to the temple. Sculpture in Egypt, and in Greece, grew up in subordination to architecture. It was the ornament of the temple wall; at first, a rude relief carved on pediments, then the relief became bolder, and a head or arm was projected from the wall, the groups being still arrayed with reference to the building, which serves also as a frame to hold the figures; and when, at last, the greatest freedom of style and treatment was reached, the prevailing genius of architecture still enforced a certain calmness and con-

tinence in the statue. As soon as the statue was begun for itself, and with no reference to the temple or palace, the art began to decline; freak, extravagance, and exhibition, took the place of the old temperance. This balance-wheel, which the sculptor found in architecture, the perilous irritability of poetic talent found in the accumulated dramatic materials to which the people were already wonted, and which had a certain excellence which no single genius, however extraordinary, could hope to create.

In point of fact, it appears that Shakespeare did owe debts in all directions, and was able to use whatever he found; and the amount of indebtedness may be inferred from Malone's laborious computations in regard to the First, Second and Third parts of "Henry VI.," in which, "out of 6043 lines, 1771 were written by some author preceding Shakespeare; 2373 by him, on the foundation laid by his predecessors; and 1899 were entirely his own." And the preceding investigation hardly leaves a single drama of his absolute invention. Malone's sentence is an important piece of external history. In "Henry VIII.," I think I see plainly the cropping out of the original rock on which his own finer stratum

Cottage of Ann Hathaway, Shakespeare's Wife.

was laid. The first play was written by a superior, thoughtful man, with a vicious ear. I can mark his lines, and know well their cadence. See Wolsey's soliloquy, and the following scene with Cromwell, where, — instead of the metre of Shakespeare, whose secret is, that the thought constructs the tune, so that reading for the sense will best bring out the rhythm, — here the lines are constructed on a given tune, and the verse has even a trace of pulpit eloquence. But the play contains, through all its length, unmistakable traits of Shakespeare's hand, and some passages, as the account of the coronation, are like autographs. What is odd, the compliment to Queen Elizabeth is in the bad rhythm.

Shakespeare knew that tradition supplies a better fable than any invention can. If he lost any credit of design, he augmented his resources; and, at that day our petulant demand for originality was not so much pressed. There was no literature for the million. The universal reading, the cheap press, were unknown. A great poet, who appears in illiterate times, absorbs into his sphere all the light which is anywhere radiating. Every intellectual jewel, every flower of sentiment, it is his fine office to bring to his people; and he comes to value his memory equally with his invention. He is therefore little solicitous whence his thoughts have been derived; whether through translation, whether through tradition, whether by travel in distant countries, whether by inspiration; from whatever source, they are equally welcome to his uncritical audience. Nay, he borrows very near home. Other men say wise things as well as he; only they say a good many foolish things, and do not know when they have spoken wisely.

He knows the sparkle of the true stone, and puts it in high place, wherever he finds it.

Such is the happy position of Homer, perhaps; of Chaucer, of Saadi. They felt that all wit was their wit. And they are librarians and historiographers, as well as poets. Each romancer was heir and dispenser of all the hundred tales of the world, —

> "Presenting Thebes' and Pelops' line
> And the tale of Troy divine." . . .

Our poet's mask was impenetrable. You cannot see the mountain near. It took a century to make it suspected; and not until two centuries had passed, after his death, did any criticism which we think adequate begin to appear.

It was not possible to write the history of Shakespeare till now; for he is the father of German literature: it was on the introduction of Shakespeare into German by Lessing, and the translation of his works by Wieland and Schlegel, that the rapid burst of German literature was most intimately connected. It was not until the nineteenth century, whose speculative genius is a sort of living Hamlet, that the tragedy of Hamlet could find such wondering readers. Now, literature, philosophy, and thought, are Shakespearized. His mind is the horizon beyond which, at present, we do not see. Our ears are educated to music by his rhythm. Coleridge and Goethe are the only critics who have expressed our convictions with any adequate fidelity; but there is in all cultivated minds a silent appreciation of his superlative power and beauty, which, like Christianity, qualifies the period.

The Shakespeare Society have inquired in all directions, advertised the missing facts, offered money for any information that will lead to proof; and with what results? Beside some important illustration of the history of the English stage, to which I have adverted, they have gleaned a few facts touching the property, and dealings in regard to property, of the poet. It appears that, from year to year, he owned a larger share in the Blackfriars' Theatre: its wardrobe and other appurtenances were his: that he bought an estate in his native village, with his earnings, as writer and shareholder; that he lived in the best house in Stratford; was intrusted by his neighbors with their commissions in London, as of borrowing money, and the like; that he was a veritable farmer. About the time when he was writing Macbeth, he sues Philip Rogers, in the borough-court of Stratford, for thirty-five shillings, ten pence, for corn delivered to him at different times; and, in all respects, appears as a good husband, with no reputation for eccentricity or excess. He was a good-natured sort of man, an actor and shareholder in the theatre, not in any striking manner distinguished from other actors and managers. I admit the importance of this information. It was well worth the pains that have been taken to precure it.

But whatever scraps of information concerning his condition these researches may have rescued, they can shed no light upon that infinite invention which is the concealed magnet of his attraction for us. We are very clumsy writers of history. We tell the chronicle of parentage, birth, birthplace, schooling, school-mates, earning of money, marriage, publication of books, celeb-

rity, death; and when we have come to an end of this gossip, no ray of relation appears between it and the goddess-born; and it seems as if, had we dipped at random into the "Modern Plutarch," and read any other life there, it would have fitted the poems as well. It is the essence of poetry to spring, like the rainbow daughter of Wonder, from the invisible, to abolish the past, and refuse all history. Malone, Warburton, Dyce, and Collier, have wasted their oil. The famed theatres, Covent Garden, Drury Lane, the Park, the Tremont, have vainly assisted. Betterton, Garrick, Kemble, Kean, and Macready, dedicate their lives to this genius; him they crown, elucidate, obey, and express. The genius knows them not. The recitation begins; one golden word leaps out immortal from all this painted pedantry, and sweetly torments us with invitations to its own inaccessible homes.

I remember, I went once to see the Hamlet of a famed performer, the pride of the English stage; and all I then heard, and all I now remember, of the tragedian, was that in which the tragedian had no part; simply, Hamlet's question to the ghost, —

> "What may this mean,
> That thou, dead corse, again in complete steel
> Revisit'st thus the glimpses of the moon?"

That imagination which dilates the closet he writes in to the world's dimension, crowds it with agents in rank and order, as quickly reduces the big reality to be the glimpses of the moon. These tricks of his magic spoil for us the illusions of the green-room. Can any biography shed light on the localities into which the "Mid-

summer-Night's Dream" admits me? Did Shakspeare confide to any notary or parish recorder, sacristan, or surrogate, in Stratford, the genesis of that delicate creation? The forest of Arden, the nimble air of Scone Castle, the moonlight of Portia's villa, "the antres vast and desarts idle," of Othello's captivity, — where is the third cousin, or grandnephew, the chancellor's file of accounts, or private letter, that has kept one word of those transcendent secrets? In fine, in this drama, as in all great works of art, — in the Cyclopæan architecture of Egypt and India; in the Phidian sculpture; the Gothic ministers; the Italian painting; the Ballads of Spain and Scotland, — the Genius draws up the ladder after him, when the creative age goes up to heaven, and gives way to a new, who sees the works, and asks in vain for a history.

Church Where Shakespeare is Buried.

Shakespeare is the only biographer of Shakespeare; and even he can tell nothing, except to the Shakespeare in us; that is, to our most apprehensive and sympathetic hour. He cannot step from off his tripod,

and gives us anecdotes of his inspirations. Read the antique documents extricated, analyzed, and compared, by the assiduous Dyce and Collier; and now read one of those skyey sentences, — aerolites — which seem to have fallen out of heaven, and which, not your experience, but the man within the breast has accepted as words of fate; and tell me if they match; if the former account in any manner for the latter; or, which gives the most historical insight into the man.

Hence, though our external history is so meagre, yet, with Shakespeare for biographer, instead of Aubrey and Rowe, we have really the information which is material, that which describes character and fortune; that which, if we were about to meet the man and deal with him, would most import us to know. We have his recorded convictions on those questions which knock for answer at every heart, — on life and death, on love, on wealth and poverty, on the prizes of life, and the ways whereby we come at them; on the characters of men, and the influences, occult and open, which affect their fortunes: and on those mysterious and demonical powers which defy our science, and which yet interweave their malice and their gift in our brightest hours.

Shakespeare's Epitaph.

Who ever read the volume of the "Sonnets," without finding that the poet had there revealed, under masks that are no masks to the intelligent, the lore of friend-

ship and of love; the confusion of sentiments in the most susceptible, and, at the same time, the most intellectual of men?

What trait of his private mind has he hidden in his dramas? One can discern, in his ample pictures of the gentleman and the king, what forms and humanities pleased him; his delight in troops of friends, in large hospitality, in cheerful giving. Let Timon, let Warwick, let Antonio the merchant, answer for his great heart. So far from Shakespeare being the least known, he is the one person, in all modern history, known to us. What point of morals, of manners, of economy, of philosophy, of religion, of taste, of the conduct of life, has he not settled? What mystery has he not signified his knowledge of? What office or function, or district of man's work, has he not remembered? What king has he not taught state, as Talma taught Napoleon? What maiden has not found him finer than her delicacy? What lover has he not outloved? What sage has he not outseen? What gentleman has he not instructed in the rudeness of his behavior? . . .

Shakespeare is as much out of the category of eminent authors, as he is out of the crowd. He is inconceivably wise; the others, conceivably. A good reader can, in a sort, nestle into Plato's brain, and think from thence; but not into Shakespeare's. We are still out of doors. For executive faculty, for creation, Shakespeare is unique. No man can imagine it better. He was the farthest reach of subtlety compatible with an individual self, — the subtilest of authors, and only just within the possibility of authorship. With this wisdom of life, is the equal endowment of imaginative and of

lyric power. He clothed the creatures of his legend with form and sentiments, as if they were people who had lived under his roof; and few real men have left such distinct characters as these fictions. And they spoke in language as sweet as it was fit. Yet his talents never seduced him into an ostentation, nor did he harp on one string. An omnipresent humanity coordinates all his faculties. Give a man of talents a story to tell, and his partiality will presently appear. He has certain observations, opinions, topics, which have some accidental prominence, and which he disposes all to exhibit. He crams this part, and starves that other part, consulting not the fitness of the thing, but his fitness and strength. But Shakespeare has no peculiarity, no importunate topic; but all is duly given; no veins, no curiosities; no cow-painter, no bird-fancier, no mannerist is he: he has no discoverable egotism: the great he tells greatly; the small subordinately. He is wise without emphasis or assertion; he is strong, as nature is strong, who lifts the land into mountain slopes without effort, and by the same rule as she floats a bubble in the air, and likes as well to do the one as the other. This makes that equality of power in farce, tragedy, narrative, and love-songs; a merit so incessant, that each reader is incredulous of the perception of other readers.

This power of expression, or of transferring the inmost truth of things into music and verse, makes him the type of the poet, and has added a new problem to metaphysics. This is that which throws him into natural history, as a main production of the globe, and as announcing new eras and ameliorations. Things were

mirrored in his poetry without loss or blur: he could paint the fine with precision, the great with compass: the tragic and the comic indifferently, and without any distortion or favor. He carried his powerful execution into minute details, to a hair point; finishes an eyelash or a dimple as firmly as he draws a mountain; and yet these like natures, will bear the scrutiny of the solar microscope.

In short, he is the chief example to prove that more or less of production, more or fewer pictures, is a thing indifferent. He had the power to make one picture. Daguerre learned how to let one flower etch its image on his plate of iodine; and then proceeds at leisure to etch a million. There are always objects; but there was never representation. Here is perfect representation, at last; and now let the world of figures sit for their portraits. No recipe can be given for the making of a Shakespeare; but the possibility of the translation of things into song is demonstrated.

His lyric power lies in the genius of the piece. The sonnets, though their excellence is lost in the splendor of the dramas, are as inimitable as they: and it is not a merit of lines, but a total merit of the piece; like the tone of voice of some incomparable person, so is this a speech of poetic beings, and any clause as unproducible now as a whole poem.

Though the speeches in the plays, and single lines, have a beauty which tempts the ear to pause on them for their euphuism, yet the sentence is so loaded with meaning, and so linked with its foregoers and followers, that the logician is satisfied. His means are as admirable as his ends; every subordinate invention by

which he helps himself to connect some irreconcilable opposites is a poem, too. He is not reduced to dismount and walk, because his horses are running off with him in some distant direction: he always rides.

The finest poetry was first experience: but the thought has suffered a transformation since it was an experience. Cultivated men often attain a good degree of skill in writing verses; but it is easy to read, through their poems, their personal history: any one acquainted with parties can name every figure: this is Andrew, and that is Rachel. The sense thus remains prosaic. It is a caterpillar with wings, and not yet a butterfly. In the poet's mind, the fact has gone quite over into the new element of thought, and has lost all that is exuvial. This generosity abides with Shakespeare. We say, from the truth and closeness of his pictures, that he knows the lesson by heart. Yet there is not a trace of egotism.

One more royal trait properly belongs to the poet. I mean his cheerfulness, without which no man can be a poet, — for beauty is his aim. He loves virtue, not for its obligation, but for its grace: he delights in the world, in man, in woman, for the lovely light that sparkles from them. Beauty, the spirit of joy and hilarity, he sheds over the universe. Epicurus relates, that poetry hath such charms that a lover might forsake his mistress to partake of them. And the true bards have been noted for their firm and cheerful temper. Homer lies in sunshine; Chaucer is glad and erect; and Saadi says, "It was rumored abroad that I was penitent; but what had I to do with repentance?" Not less sovereign and cheerful, — much more sover-

eign and cheerful is the tone of Shakespeare. His name suggests joy and emancipation to the heart of men. If he should appear in any company of human souls, who would not march in his troop? He touches nothing that doth not borrow health and longevity from his festive style. . . .

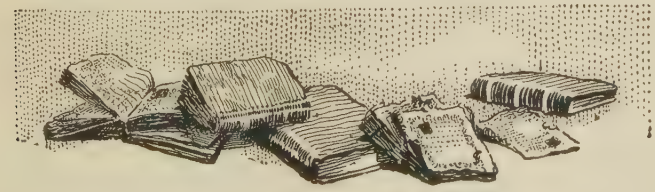
Shakespeare, Homer, Dante, Chaucer, saw the splendor of meaning that plays over the visible world; knew that a tree had another use than for apples, and corn another than meal, and the ball of the earth, than for tillage and roads: that these things bore a second and finer harvest to the mind, being emblems of its thoughts, and conveying in all their natural history a certain mute commentary on human life.

Shakespeare employed them as colors to compose his picture. He rested in their beauty; and never took the step which seemed inevitable to such genius, namely, to explore the virtue which resides in these symbols, and imparts this power, — what is that which they themselves say? He converted the elements, which waited on his command, into entertainments. He was master of the revels to mankind. Is it not as if one should have, through majestic powers of science, the comets given into his hand, or the planets and their moon; and should draw them from their orbits to glare with the municipal fireworks on a holiday night, and advertise in all towns, "very superior pyrotechny this evening!"

Are the agents of nature and the power to understand them, worth no more than a street serenade, or the breath of a cigar? One remembers again the trumpet-text in the Koran — "The heavens and the earth,

and all that is between them, think ye we have created them in jest?"

As long as the question is of talent and mental power, the world of men has not his equal to show. But when the question is to life, and its materials, and its auxiliaries, how does he profit me? What does it signify? It is but a Twelfth Night, or Midsummer-Night's dream, or a Winter's Evenings Tale: what signifies another picture more or less? The Egyptain verdict of the Shakespeare Societies comes to mind, that he was a jovial actor and manager. I cannot marry this fact to his verse. Other admirable men have led lives in some sort of keeping with their thought; but this man, in wide contrast. Had he been less, had he reached only the common measure of great authors, of Bacon, Milton, Tasso, Cervantes, we might leave the fact in the twilight of human fate: but, that this man of men, he who gave to the science of mind a new and larger subject than had ever existed, and planted the standard of humanity some furlongs forward into Chaos, — that he should not be wise for himself, — it must even go into the world's history, that the best poet led an obscure and profane life, using his genius for the public amusement.



GEORGE STEPHENSON

By SAMUEL SMILES.

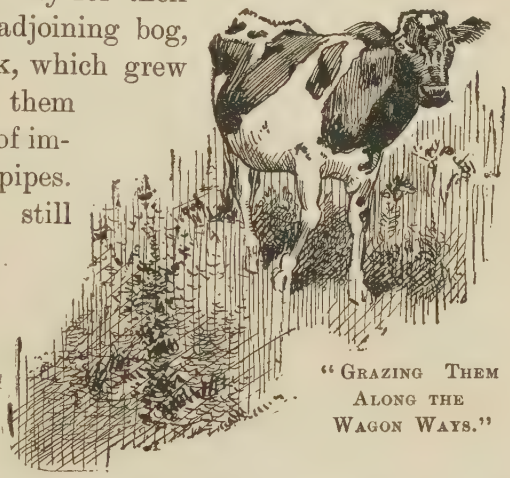
(1781–1848.)

George Stephenson.

AS every child in a poor man's house is a burden until his little hands can be turned to profitable account and made to earn money towards supplying the indispensable wants of the family, George Stephenson was put to work as soon as an opportunity of employment presented itself. A widow, named Grace Ainslie, then occupied the neighboring farm-house of Dewley. She kept a number of cows, and had the privilege of grazing them along the wagon ways. She needed a boy to herd the cows to keep them out of the way of the wagons, and to prevent their straying or trespassing on the neighbors' "liberties"; the boy's duty was also to bar the gates at night after all the wagons had passed. George petitioned for this post, and to his great joy he was appointed, at the wage of twopence a day.

It was light employment, and he had plenty of spare time on his hands, which he spent in bird-nesting,

making whistles out of reeds and scrannel straws, and erecting Liliputian mills in the little water streams that ran into the Dewley bog. But his favorite amusement at this early age was erecting clay engines, in conjunction with his chosen playmate, Tom Tholoway. They found the clay for their engines in the adjoining bog, and the hemlock, which grew about, supplied them with abundance of imaginary steam-pipes. The place is still pointed out, "just aboon the cut-end," as the people of the hamlet describe it, where the future engineer made his first essays in modelling. This early indication of a mechanical turn of mind may remind the reader of a similar anecdote of the boy Smeaton, who, when missed one day by his parents, was found mounted on the roof of the cottage fixing a puny windmill.



"Grazing Them Along the Wagon Ways."

As the boy grew older and more able to work, he was set to lead the horses when ploughing, though scarce big enough to stride across the furrows. He was also employed to hoe turnips and do similar farm work, for which he was paid the advanced wage of fourpence a day. But his highest ambition was to be taken on at the colliery where his father worked; and he shortly joined his elder brother James there as a "corf-bitter,"

or "picker," where he was employed in clearing the coal of stones, bats and dross. His wages were now advanced to sixpence a day, and afterwards to eightpence when he was set to drive the Gin-horse.

Shortly after he went to Black Callerton Colliery to drive the Gin there. And as that colliery lies about two miles across the fields from Dewley Burn, the boy walked that distance early in the morning to his work, returning home late in the evening. Some of the old people of Black Callerton still remember him as a "grit bare-legged laddie," and they describe him as being then "very quick-witted, and full of fun and tricks." As they said, "there was nothing under the sun but he tried to imitate." He was usually foremost in the sports and pastimes of youth.

Among his first strongly developed tastes, was the love of birds and animals, which he inherited from his father. Blackbirds were his especial favorites. The hedges between Dewley and Black Callerton were capital bird-nesting places; and there was not a nest there that he did not know of. When the young birds were old enough he would bring them home with him, feed them, teach them to fly about the cottage unconfined by cages. One of his blackbirds became so tame, that after flying about the doors all day, and in and out of the cottage, it would take up its roost upon the bedhead at night. And most singular of all, the bird would disappear in the spring and summer months, when it was supposed to go to the woods to pair and rear its young, after which it would reappear at the cottage and resume its social habits during the winter. This went on for several years. George had also a

stock of tame rabbits, for which he built a little house behind the cottage, and for many years he continued to pride himself upon the superiority of his breed.

After he had driven the Gin for some time at Dewley and Black Callerton, he was at length taken on as an assistant to his father in firing the engine at Dewley. This was a step of promotion which he had anxiously desired; his only fear being lest he should be found too young for the work. Indeed, he afterwards used to relate how he was wont to hide himself from sight when the owner of the colliery went round, lest he should be thought too little a boy thus to earn his small wages. Since he had modelled his clay engines

There Was Not a Nest There That He Did Not Know.

in the bog, his young ambition was to be an engineman. And to be an assistant fireman was the first step towards this position. Great therefore was his exultation when, at about fourteen years of age, he was appointed assistant fireman, at the wage of a shilling a day.

But the coal at Dewley Burn being at length worked out, and the pit being about to be "laid in," the family prepared for another removal. This time their removal was to Jolly's Close, a few miles to the south, close behind the village of Newburn, where another coal mine of the Duke's, called "the Duke's Winnin," had recently been opened out.

Jolly's Close then consisted of a small row of cottages situated upon a flat piece of ground enclosed by lofty banks on either side, at the bottom of the narrow rift called Walbottle Dean. Jolly's Close, however, no longer exists, and only a few of the oldest people in the neighborhood are aware that such a place ever was. A mountain of earth, shale, débris, the accumulation of fifty years, lies tumbled over its site, — the rubbish, or "deeds," having been shot over from the hillside, once a green hill, but now a scarified, blasted rock, along which furnaces blaze and engines labor night and day. The stream in the hollow, which used to run in front of old Robert Stephenson's front door, is made to pay tribute in the form of water-power at every wheel in the Dean; and only a narrow strip now remains of what was once a green meadow.

The children of the Stephenson family were now growing up apace, and were most of them of an age to be able to earn money at various kinds of colliery work. James and George, the two oldest sons, worked as assis-

tant-firemen ; and the younger boys worked as wheelers or pickers on the bank tops. The two girls helped their mother with the household work.

So far as weekly earnings went, the family were at this time pretty comfortable. Their united earnings amounted to from 35*s*. to 40*s*. a week ; and they were enabled to command a fair share of the necessaries of life. But it will be remembered that in those days, from 1797 to 1802, it was much more difficult for the working classes to live than it is now ; and money did not go nearly so far. The price of bread was excessive. The price of wheat, which for three years preceding 1795 had averaged only 54*s*., now advanced to 76*s*. a quarter, and it continued to rise, until December, 1800, it had advanced to 130*s*., and barley and oats in proportion. There was a great dearth of provisions ; corn riots were of frequent occurrence ; and the taxes on all articles of consumption were very heavy. The war with Napoleon was then raging, derangements of trade were frequent, causing occasional suspensions of employment in all departments of industry, from the pressure of which working people are always the first to suffer.

During this severe period George Stephenson continued to live with his parents at Jolly's Close. Other workings of the coal were opened out in the neighborhood ; and to one of these he was removed as fireman on his own account. This was called the " Mid Mill Winnin "; there he had for his mate a young man named Bill Coe, and to these two was entrusted the working of the little engine put up at Mid Mill. They worked together there for about two years, by twelve hour shifts, George firing the engine at a wage of a shilling a day.

He was now fifteen years old. His ambition was yet limited to attaining the standing of a full workman, at a man's wages; and with that view he endeavored to attain such a knowledge of his engine as would eventually lead to his employment as an engineman, with its accompanying advantage of higher pay. He was a steady, sober, hard-working young man, and nothing more, according to the estimate of his fellow-workmen.

One of the favorite pastimes in the bye hours was trying feats of strength with his companions. Although in frame he was not particularly robust, yet he was big and bony, and considered very strong for his age. His principal competitor was Robert Hawthorne, with whom he had frequent trials of muscular strength and dexterity, such as lifting heavy weights, throwing the hammer, and putting the stone. At throwing the hammer George had no compeer; but there was a knack in putting the stone which he could never acquire, and here Hawthorne beat him. At lifting heavy weights off the ground from between his feet, — by means of a bar of iron passed through them, the bar placed against his knees as a fulcrum, and then straightening the spine and lifting them sheer up, — Stephenson was very successful. On one occasion, they relate, he lifted as much as sixty stones' weight in this way — a striking indication of his strength of bone and vigor of muscle.

When the pit at Mid Mill was closed, George and his companion Coe were sent to work another pumping engine erected near Throckley Bridge, where they continued for some months. It was while working at this place, that his wages were raised to 12*s*. a week — an event of no small importance in his estimation. On

Stephenson and His Father Studying Plans.

coming out of the foreman's office that Saturday evening on which he received the advance, he announced the fact to his fellow-workmen, adding triumphantly, "I am now a made man for life!"

The pit opened at Newburn, at which old Robert Stephenson worked, proving a failure, was closed; and a new pit was sunk at Water-row. A pumping engine was erected there by Robert Hawthorne, now the Duke's engineer at Walbottle, and old Stephenson went to work it as fireman, his son George acting as the engineman or plugman. At this time he was about seventeen years old, — a very youthful age for occupying so responsible a post. He had thus already got ahead of his father in his station as a workman; for the plugman holds a higher grade than the fireman, requiring more practical knowledge and skill, and usually receiving higher wages.

Old Stephenson as a Fireman.

The duty of plugman was to watch the engine and to see that it was kept well in work, and that the pumps were efficient in drawing the water. When the water level in the pit was lowered, and the suction became incomplete through the exposure of the suction holes, then his business was to proceed to the bottom of the shaft, and plug the tube so that the pump should draw; hence the designation of Plugman.

If a stoppage in the engine took place through any defect in it which he was incapable of remedying, then it was his duty to call in the aid of the chief engineer of the colliery to set the engine to rights.

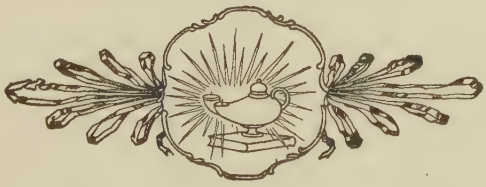
But from the time when George Stephenson was appointed fireman, and more particularly afterwards as engineman, he devoted himself so assiduously and so successfully to the study of the engine and its gearing — taking the machine to pieces in his leisure hours for the purpose of cleaning and mastering its various parts, — that he very soon acquired a thorough practical knowledge of its construction and mode of working, and thus he very rarely needed to call to his aid the engineer of the colliery. His engine became a sort of pet with him, and he was never wearied of watching and inspecting it with devoted admiration.

There is indeed a peculiar fascination about an engine, to the intelligent workman who watches and feeds it. It is almost sublime in its untiring industry and quiet power: capable of performing the most gigantic work, yet so docile that a child's hand may guide it. No wonder, therefore, that the workman, who is the daily companion of this lifelike machine, and is constantly watching it with constant care, at length comes to regard it with a degree of personal interest and regard, speaking of it often in terms of glowing admiration. This daily contemplation of the steam-engine, and the sight of its steady action, is an education of itself to the ingenious and thoughtful workman.

It is certainly a striking and remarkable fact, that nearly all that has been done for the improvement of

the steam-engine has been accomplished, not by philosophers and scientific men, but by laborers, mechanics, and enginemen. It would appear as if this were one of the departments of practical science in which the higher powers of the human mind must bend to mechanical instinct. The steam-engine was but a mere toy, until it was taken in hand by workmen. Savery was originally a working miner. Newcomen a blacksmith, and his partner Cawley a glazier. In the hands of Watt, the instrument-maker, who devoted almost a life to the subject, the condensing engine acquired gigantic strength; and George Stephenson, the colliery engine-man, was certainly not the least of those who assisted to bring the high-pressure engine to its present power.

While studying to master the details of his engine, to know its weaknesses, and to quicken its powers, George Stephenson gradually acquired the character of a clever and improving workman. Whatever he was set to do, that he endeavored to do well and thoroughly; never neglecting small matters, but aiming at being a complete workman at all points; thus gradually perfecting his own mechanical capacity, and securing at the same time the respect of his fellow-workmen and the increased confidence and esteem of his employers.



NOTES

DAVENPORT, RICHARD ALFRED, born about 1777. He was an assiduous editor and compiler. He wrote some of the biographical notices and critical prefaces for the hundred volumes of Whittingham's English Poets, and edited more than a hundred volumes of miscellaneous works. He died in London, Jan. 25, 1852.

CHAMPLIN, JOHN DENISON, was born at Stonington, Conn., Jan. 29, 1834. He graduated at Yale, and after being admitted to the bar entered the profession of journalism. He has written and edited a great number of useful hand-books and cyclopædias.

HENDERSON, GEORGE FRANCES ROBERT, entered the British army in 1878. Was for many years Director of Military Art and History at the Staff College. He served with distinction in the Egyptian war, and went to South Africa in 1900 with despatches. His principal literary work is a full and careful life of Stonewall Jackson.

MABIE, HAMILTON WRIGHT, was born at Cold Spring, N. Y., Dec. 13, 1846; was graduated at Williams College and at the Columbia College Law School. He has written a large number of valuable books on educational and literary subjects. Has been since 1879 associate editor of the *Outlook*.

TYNDALL, JOHN, was born Aug. 2, 1820. After engaging in ordnance survey and railway work he studied science in Germany, and became professor of Natural Philosophy in the Royal Institution in 1853. His great contribution to science related to heat as a mode of motion. He was an authority on Alpine climbing. He died Dec. 4, 1893.

HALE, EDWARD EVERETT, was born in Boston, April 3, 1822; graduated at Harvard in 1839. In 1856 became minister of the South Congregational Church. Has been prominent in all philanthropic enterprises, and the author of a large number of remarkable books.

BANCROFT, GEORGE, was born in Worcester, Mass., Oct. 3, 1800. He studied at Harvard and in several of the German Universities, and on his return to America became professor of Greek at Canton, Ohio. His History of the United States brought him wide fame. He served with distinction as American minister to England and Prussia. He died Jan. 17, 1891.

THAYER, WILLIAM M., was born at Franklin, Mass., in 1820. He graduated at Brown University in 1843, and was for nearly twenty years Congregationalist minister at Ashland. He wrote a large number of books for the young. He died in 1898.

WHITTIER, JOHN G., was born at Haverhill, Dec. 17, 1807. He worked at farming till he was eighteen. He became absorbed in the anti-slavery contest, and many of his poems were inspired by his strong feelings in favor of freedom. He wrote many volumes of verse and several in prose. He died Sept. 7, 1892.

HAWTHORNE, NATHANIEL, was born at Salem, July 4, 1804. He graduated at Bowdoin College, and devoted himself to literature. He held several government

positions, among them that of U. S. consul at Liverpool. He wrote many novels of extraordinary power; and though his fame was of slow growth, he is generally regarded as the greatest of American authors. He died May 19, 1864.

PARTON, JAMES, was born at Canterbury, England, Feb. 9, 1822. He came early to this country, when he served for some years as a teacher. He engaged in journalism and general literature, and published a large number of books, biographical and political. He died Oct. 17, 1891.

SMILES, SAMUEL, was born at Haddington, Scotland, Dec. 23, 1812, and educated at Edinburgh University. After practising as a surgeon he engaged in journalism, becoming later Secretary to the South Eastern Railway, a position which he held till 1856. He wrote a large number of biographical books. His "Self-Help," was extremely successful, and has been translated into various languages.

MACAULAY, THOMAS BABINGTON, BARON, was born Oct. 25, 1800, at Rothley Temple, and was educated at Trinity College, Cambridge, where he distinguished himself by his brilliant scholarship. At the bar and in political life he was equally successful. He was elected M. P. in 1830. In 1834 he was sent to India, and returned with a fortune. In 1857 he was raised to the Peerage. He left a powerful impression on his age as a poet, essayist, orator, wit, and historian. He died Dec. 28, 1859.

MEN WHO HAVE RISEN

SUGGESTIONS FOR SUPPLEMENTARY READING

Napoleon
J. S. C. Abbott

How Success is Won
Lives of Poor Boys Who Became Famous
Sarah K Bolton

Statesmen
Noah Brooks

Successful Men of To-day
Wilbur F. Crafts

Autobiography
Benjamin Franklin

Personal Memoirs
U. S. Grant

Inventors
Philip G. Herbert

Men, Places and Things
William Mathews

Captains of Industry
James Parton

George Washington
Horace E. Scudder

Life of George Stephenson
Samuel Smiles

The Men Who Made the Nation
Edwin E. Sparks

Men of Business
Wm. O. Stoddard

Self-made Men
Harriet Beecher Stowe

American Boy's Life of William McKinley
Edward Stratemeyer

From Log Cabin to White House
From Pioneer Home to White House
Men Who Win
William M. Thayer

Up from Slavery
Booker T. Washington